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**National Highway  
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ON-SITE AIR BAG INVESTIGATION

CASE NO. - 95-05

FLEET - PRIVATE VEHICLE

LOCATION - [REDACTED], ILLINOIS

ACCIDENT DATE - [REDACTED], 1994

Submitted By:

[REDACTED]  
Senior Staff Associate

[REDACTED], 1995

Revised Submission:

[REDACTED], 1995

Contract Number: DTNH22-94-D-17058

Prepared for:

U.S. Department of Transportation  
National Highway Traffic Safety Administration  
National Center for Statistics and Analysis  
Washington, D.C. 20590



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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

1. Report No. TRC/IU Case No. 95-05		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle On-Site Air Bag Investigation Private Vehicle Location - [REDACTED], Illinois				5. Report Date [REDACTED], 1995; [REDACTED]/95	
				6. Performing Organization Code	
				8. Performing Organization Report No. TRC/IU 95-05, Task 9513	
7. Author(s) [REDACTED]				10. Work Unit No. (TRAIS)	
9. Performing Organization Name and Address Indiana University Transportation Research Center [REDACTED] [REDACTED] Indiana [REDACTED]				11. Contract or Grant No. DTNH22-94-D-17058	
				13. Type of Report and Period Covered [REDACTED], 1994	
12. Sponsoring Agency Name and Address U.S. Department of Transportation (NRD-32) National Highway Traffic Safety Administration National Center for Statistics and Analysis Washington, D.C. 20590				14. Sponsoring Agency Code	
15. Supplementary Notes On-site air bag deployment investigation involving a 1990 Cadillac Eldorado, 2-door coupe, with manual belts and driver's air bag					
16. Abstract This report covers an on-site investigation of an air bag deployment crash that involved a 1990 Cadillac Eldorado, a 1994 Oldsmobile Cutlass Ciera S, and a 1993 Chevrolet Astro cargo van. The Eldorado was traveling northwest in the left-hand, turn lane of a five-lane (i.e., two northwestbound through lanes, two southeastbound through lanes, and a left-hand turn lane on each side of the intersection), undivided, U.S. roadway. The Cutlass Ciera was stopped heading northwest in the same left-hand, turn lane on the same five-lane roadway. The Astro was traveling southeast in the inside, southeastbound lane of the same five-lane roadway prior to its involvement in the crash. The front left of the Eldorado (case vehicle) impacted the back right of the Cutlass Ciera (vehicle #2) causing the case vehicle's driver side supplemental restraint (air bag) to deploy. Vehicle #2 was knocked northwestward approximately 53 meters (175 feet) and rotated approximately fifteen degrees clockwise after impact and came to rest heading north-northwest, straddling the solid double yellow center lines which separated the inside, northwestbound lane from the southeastbound, left-hand, turn lane. After impact the case vehicle continued west-northwest approximately 16 meters (52 feet) and veered approximately 15 degrees further west. Subsequently, the front right of the case vehicle impacted the front left of the Astro (vehicle #3) in the inside, southeastbound lane. Both the case vehicle and vehicle #3 came to rest in the middle of the intersection near their the point of impact. The case vehicle rotated approximately five degrees counterclockwise and came to rest heading west-northwest. Vehicle #3 rotated less than five degrees clockwise and came to rest heading south-southeast. The case vehicle's driver (51 year-old female) was not wearing the available, active, three-point lap and shoulder belt and sustained, according to her autopsy, fatal injuries which included: lacerations to her brain stem, aorta, and liver, a subarachnoid hemorrhage, a fractured sternum, multiple rib fractures, a fracture/dislocation at C <sub>1</sub> /C <sub>2</sub> , and multiple soft tissue injuries.					
17. Key Words Motor Vehicle Traffic Accident Air Bag Deployment Injury Severity			18. Distribution Statement General Public		
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified		21. No. of Pages 165	22. Price \$7,500	

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# TRC/IU ON-SITE AIR BAG INVESTIGATION

TRC/IU CASE NO. 95-05

FLEET - PRIVATE VEHICLE  
LOCATION - [REDACTED], ILLINOIS

## SUMMARY

This report concerns a motor vehicle crash involving an air bag equipped 1990 Cadillac Eldorado, two-door coupe, a 1994 Oldsmobile Cutlass Ciera S, four-door sedan, and a 1993 Chevrolet Astro cargo van occurring on [REDACTED] 1994 at [REDACTED] p.m., in [REDACTED] Illinois on a U.S. Highway. This crash is of special interest because the case vehicle's driver was fatally injured by her deploying, driver side, air bag.

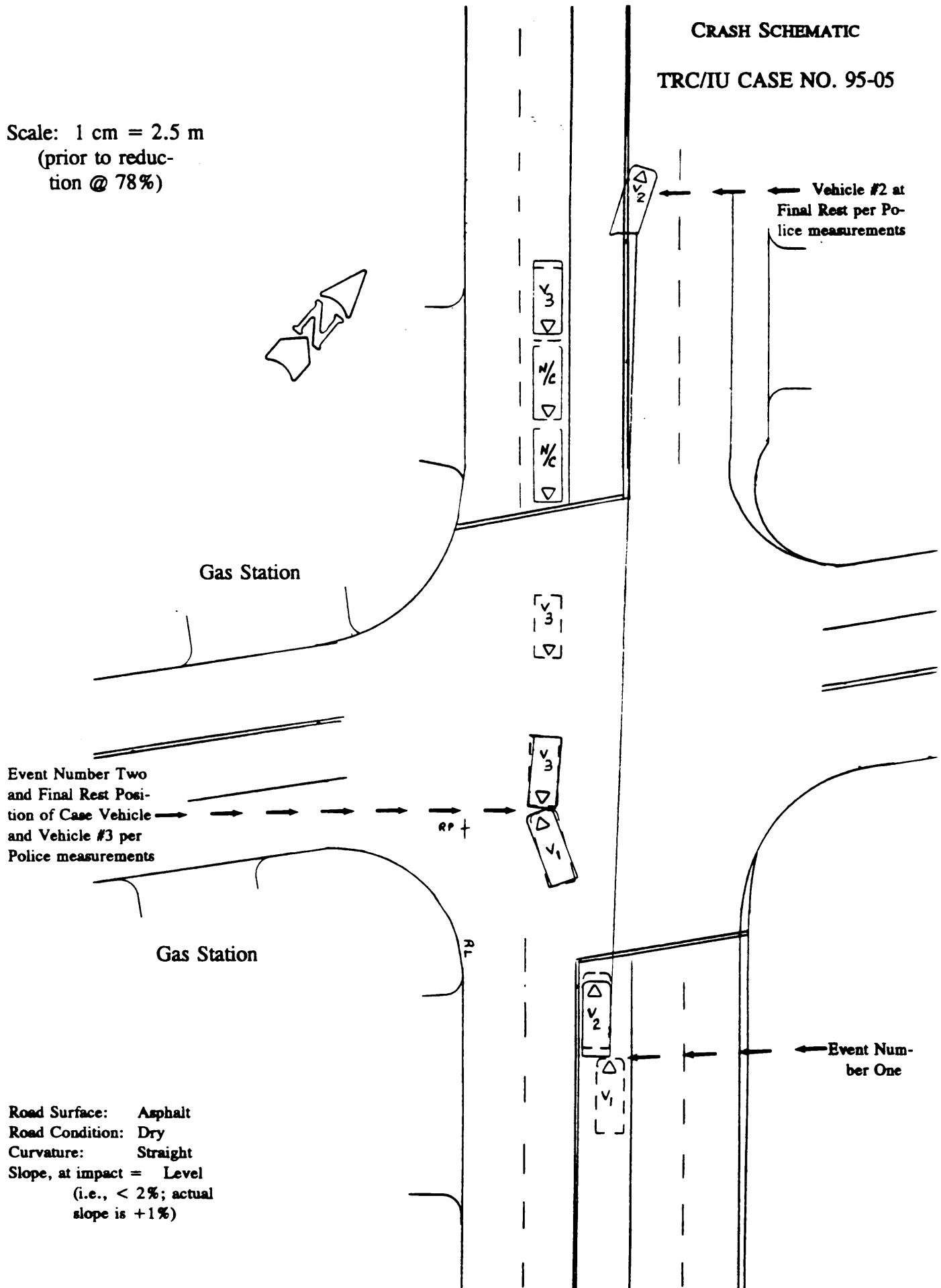
The Eldorado was traveling northwest in the left-hand, turn lane of a five-lane (i.e., two northwestbound through lanes, two southeastbound through lanes, and a left-hand turn lane on each side of the intersection), undivided, U.S. roadway when it impacted the Cutlass Ciera which was stopped heading northwest in the same left-hand, turn lane on the same five-lane roadway. The Astro was traveling southeast in the inside, southeastbound lane of the same five-lane roadway prior to its involvement in the crash. The Cutlass Ciera was knocked northwestward approximately 53 meters (175 feet) and rotated approximately fifteen degrees clockwise after impact and came to rest heading north-northwest, straddling the solid double yellow center lines which separated the inside, northwestbound lane from the southeastbound, left-hand, turn lane. After impact the Eldorado continued west-northwest approximately 16 meters (52 feet), veering approximately 15 degrees further west, and impacted the Astro in the inside, southeastbound lane. Both the Eldorado and the Astro came to rest in the middle of the intersection near the point of impact. The Eldorado rotated approximately five degrees counterclockwise and came to rest heading west-northwest. The Astro rotated less than five degrees clockwise and came to rest heading south-southeast.

The front left of the Eldorado impacted the back right of the Cutlass Ciera. Subsequently, the front right of the Eldorado impacted the front left of the Astro. The CDCs were determined to be: 12-FYEW-1 and 12-FZLW-1 for the Eldorado, 06-BZEW-3 for the Cutlass Ciera, and 12-FLEW-1 for the Astro. The OLDMISS and CRASHPC (i.e., barrier equivalent algorithm) reconstruction programs, were used on the highest severity impact to the Eldorado. The Total, Longitudinal, and Lateral Delta Vs are respectively: 21 k.p.h. (13 m.p.h.), -21 k.p.h. (-13 m.p.h.), and 0 k.p.h. (0 m.p.h.).

The 1990 Cadillac Eldorado was equipped with a driver supplemental restraint system (air bag) which deployed as a result of the *first* frontal impact. The driver of the vehicle (51 year-old female) was not wearing the available, active, three-point lap and shoulder belt. She sustained, according to her autopsy, fatal injuries which included: lacerations to her brain stem, aorta, and liver, a subarachnoid hemorrhage, a fractured sternum, multiple rib fractures, a fracture/dislocation at C<sub>1</sub>/C<sub>2</sub>, and multiple soft tissue injuries. The driver of the Eldorado was listed on the Police Accident Report as sustaining a "K" (fatal) injury as a result of this crash. The 1994 Oldsmobile Cutlass Ciera was equipped with a driver supplemental restraint system (air bag) which did not deploy as a result of its rear impact. The driver (45 year-old female) of the Cutlass Ciera was listed on the Police Accident Report as sustaining a "B" (nonincapacitating-evident) injury. The three other occupants in the Ciera: right front (20 year-old female), left rear (16 year-old female), and right rear (13 year-old male), were listed on the Police Accident Report as: not injured, "B" injury, and not injured, respectively. The driver (37 year-old male) of the Astro was listed on the Police Accident Report as not sustaining any injury as a result of this crash.

**CRASH SCHEMATIC**  
**TRC/TU CASE NO. 95-05**

Scale: 1 cm = 2.5 m  
 (prior to reduction @ 78%)



Road Surface: Asphalt  
 Road Condition: Dry  
 Curvature: Straight  
 Slope, at impact = Level  
 (i.e., < 2%; actual slope is +1%)

# TRC/IU ON-SITE AIR BAG INVESTIGATION

TRC/IU CASE NO. 95-05

FLEET - PRIVATE VEHICLE  
LOCATION - [REDACTED], ILLINOIS

## ACCIDENT DATA

Location/Street: U.S. Highway  
City/Township: [REDACTED] County, [REDACTED], Illinois  
Area/Type: Urban, commercial  
Accident Date/Time: [REDACTED] 1994, @ 4:01 p.m.  
Investigating Police Agency: [REDACTED] Police Department  
Accident Type: Car / Car - rear-end  
Occupant Injury Severity  
(air bag vehicle): Laceration to brain stem (AIS-6)

## AMBIENT CONDITIONS

Light Conditions: Daylight  
Weather Condition: Cloudy per Police Accident Report, clear according to the driver of vehicle #2  
Precipitation: None  
Road Surface: Dry

## ROADWAY

	<u>Case Vehicle</u>	<u>Vehicle #2</u>	<u>Vehicle #3</u>
Location:	U.S. highway	U.S. highway	U.S. highway
Number of Travel Lanes:	5 lanes--undivided	5-lanes--undivided	5-lanes--undivided
Width:	3.4 m (11 ft)	3.4 m (11 ft)	3.2 m (10.5 ft)
Surface Type:	Asphalt	Asphalt	Asphalt
Median:	None	None	None
Shoulders:	None, curbed	None, curbed	None, curbed

## ROADWAY (CONTINUED)

	<u>Case Vehicle</u>	<u>Vehicle #2</u>	<u>Vehicle #3</u>
Vertical alignment:	Level	Level	Level
Horizontal alignment:	Straight	Straight	Straight
Estimated Coefficient of Friction:	0.65	0.65	0.65
Traffic Density:	Heavy	Heavy	Heavy

## TRAFFIC CONTROLS

	<u>Case Vehicle</u>	<u>Vehicle #2</u>	<u>Vehicle #3</u>
Signals:	On-colors traffic control signal with left turn phase	On-colors traffic control signal with left turn phase	On-colors traffic control signal with left turn phase
Signs:	None on southeast leg, regulator sign {speed limit} on northwest leg	None on southeast leg, regulator sign {speed limit} on northwest leg	None on northwest leg, regulator sign {speed limit} on southeast leg
Markings:	Solid white lane line on right, double solid yellow no passing lines on left, and painted left turn arrow on pavement	Solid white lane line on right, double solid yellow no passing lines on left, and painted left turn arrow on pavement	Broken white lane line on right, solid white lane line on left
Speed Limit:	56 kph (35 mph)	56 kph (35 mph)	48 kph (30 mph)

## VEHICLES

	<u>Case Vehicle</u>	<u>Vehicle #2</u>	<u>Vehicle #3</u>
Year:	1990	1994	1993
Make:	Cadillac	Oldsmobile	Chevrolet
Model:	Eldorado	Cutlass Ciera S	Astro cargo van
Body Type:	2-door coupe	4-door sedan	Extended van, 4x2
V.I.N.	1G6EL1335LU—	1G3AG55M2R6—	1GCDM19Z1PB—
Color:	Maroon	White	White



VEHICLES (CONTINUED)<sup>1,2</sup>

	<u>Case Vehicle</u>	<u>Vehicle #2</u>	<u>Vehicle #3</u>
Mileage:	> 99,000 kilometers (> 61,515 miles) <sup>1</sup>	24,636 kilometers (15,308 miles)	Unknown
Engine:	4.5 liters, V8 MFI	3.1 liters, V6 MFI	4.3 liters, V6
Transmission:	4-speed automatic	4-speed automatic	4-speed automatic
Steering:	Power-assisted, rack-and-pinion	Power-assisted, rack-and-pinion	Power-assisted, worm and gear
Brakes:	Power-assisted, 4-wheel disc	Power-assisted, front disc, rear drum	Power-assisted, front disc, rear drum
Padding:	Steering wheel and hub, sunvisors, dash, "A"-pillars, side door surfaces	Unknown	Unknown
Active Restraints:	3-point, manual, lap and shoulder belts in front and rear outboard seating positions; lap belt only at rear center position	3-point, manual, lap and shoulder belts in rear outboard seating positions	3-point, manual, lap and shoulder belts in front outboard seating positions
Passive Restraints:	Factory installed driver supplemental restraint system (air bag)	3-point, automatic, lap and shoulder belts in front outboard seating positions and factory installed driver supplemental restraint system (air bag)	None
Defects:	None	Unknown <sup>2</sup>	Unknown
Fleet:	Private vehicle	Rental vehicle	Commercial vehicle
Tow status:	Towed due to damage	Towed due to damage	Driven away

<sup>1</sup> The case vehicle's odometer was recorded as 98,997 kilometers (61,514 miles) during a service call six days prior to the crash.

<sup>2</sup> According to the driver of the case vehicle, the frame of the driver's seat broke free from its floor mounts and moved backwards striking the left rear occupant's right lower leg. This contractor was not able to obtain any information pertaining to vehicle #2 because the [REDACTED] which owned the vehicle declined to cooperate with this investigation.

VEHICLE DAMAGE<sup>3,4</sup>

<u>EXTERIOR</u>	<u>Case Vehicle</u>	<u>Vehicle #2<sup>3,4</sup></u>
<u>Deployment Impact</u>		
Event number:	First	First
Object Struck:	Vehicle #2	Case vehicle
Damage location		
Damaged Plane:	Front	Back
Vertical Location		
On Plane:	Bumper	Bumper
Direct Begins:	At left bumper corner	At right bumper corner <sup>3</sup>
Length Direct:	74 cm ( 29.1 in)	Unknown <sup>4</sup>
Field L:	158 cm ( 62.2 in)	Unknown
C <sub>1</sub> :	22 cm ( 8.7 in)	Unknown
C <sub>2</sub> :	18 cm ( 7.1 in)	Unknown
C <sub>3</sub> :	16 cm ( 6.3 in)	Unknown
C <sub>4</sub> :	14 cm ( 5.5 in)	Unknown
C <sub>5</sub> :	11 cm ( 4.3 in)	Unknown
C <sub>6</sub> :	8 cm ( 3.1 in)	Unknown
D:	-42 cm (-16.5 in)	Unknown
Maximum Crush:	22 cm ( 8.7 in)	Unknown
Location:	C <sub>1</sub>	Unknown
CDC:	12-FYEW-1	06-BZEW-3
Damaged Components:	Front bumper, grille, hood, and left headlight assembly, and left and right fenders	Rear bumper, trunk lid, and right taillight assembly, and left and right quarter panels <sup>3</sup>

<u>EXTERIOR</u>	<u>Case Vehicle</u>	<u>Vehicle #3</u>
<u>Nondeployment Impact</u>		
Event number:	Second	Second
Object Struck:	Vehicle #3	Case vehicle
Damage location		
Damaged Plane:	Front	Front
Vertical Location		
On Plane:	Bumper	Bumper

<sup>3</sup> These components were taken from SELECTED PHOTOGRAPHS #13 and #14; the rental car company which owned this vehicle declined to provide this contractor with a repair or salvage estimate.

<sup>4</sup> Vehicle #2 had been salvaged prior to the assignment of this task.

VEHICLE DAMAGE (CONTINUED)<sup>5,6</sup>EXTERIOR (Continued)Case VehicleVehicle #3Nondeployment Impact (Continued)

Direct Begins:	At right bumper corner	At left bumper corner
Length Direct:	62 cm ( 24.4 in)	Unknown <sup>5</sup>
Field L:	Unknown <sup>6</sup>	Unknown
C <sub>1</sub> :	Unknown	Unknown
C <sub>2</sub> :	Unknown	Unknown
C <sub>3</sub> :	Unknown	Unknown
C <sub>4</sub> :	Unknown	Unknown
C <sub>5</sub> :	Unknown	Unknown
C <sub>6</sub> :	Unknown	Unknown
D:	Unknown	Unknown
Maximum Crush:	Unknown	Unknown
Location:	Unknown	Unknown
CDC:	12-FZEW-1	12-FLEW-1
Damaged Components:	Front bumper	Front bumper, grille, and left fender

INTERIORCase VehicleVehicle #2Vehicle #3

Damaged Components:	Steering wheel and driver side air bag module	Unknown	Unknown
Other Evidence of Occupant Contact:	Windshield and front header	Unknown	Unknown
Manual Restraint System Failures:	None	Unknown	Unknown
Seat Performance Failures:	None	Unknown (see footnotes #1 on page 5 above or footnote #15 on page 13 below)	Unknown

REPAIR

Cost Estimate:	Totalled	Totalled	Unknown
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<sup>5</sup> Vehicle #3 had already been repaired; see Selected Photographs #14 and #16.

<sup>6</sup> The damage to the case vehicle during its second impact overlapped the damage from the first impact.

VEHICLE VELOCITY ESTIMATES<sup>7</sup>

<u>Highest Delta "V"</u>	<u>Case Vehicle</u>	<u>Vehicle #2</u>
Reconstruction Program:	OLDMISS	OLDMISS
Program Algorithm:	Damage only	Damage only
Travel Speed:	48 k.p.h. (30 <sup>7</sup> m.p.h.)	0 k.p.h. ( 0 m.p.h.)
Total Delta "V":	21 k.p.h. ( 13 m.p.h.)	23 k.p.h. ( 14 m.p.h.)
Longitudinal Delta "V":	-21 k.p.h. (-13 m.p.h.)	+23 k.p.h. (+14 m.p.h.)
Lateral Delta "V":	0 k.p.h. ( 0 m.p.h.)	0 k.p.h. ( 0 m.p.h.)

## COLLISION SEQUENCE

**Pre-Crash:** According to the Police Accident Report, the case vehicle (Eldorado) was traveling northwest in the left-hand, turn lane of a five-lane (i.e., two northwestbound through lanes, two southeastbound through lanes, and a left-hand turn lane on each side of the intersection), undivided, U.S. roadway and was attempting to continue in its direction of travel in order to make a left-hand turn at the approaching intersection. Vehicle #2 (Cutlass Ciera) was stopped heading northwest in the same left-hand, turn lane on the same five-lane roadway and was waiting for traffic to clear to make a left-hand turn. Vehicle #3 (Chevrolet Astro cargo van) was traveling southeast in the inside, southeastbound lane of the same five-lane roadway and was attempting to continue, straight ahead, in its direction of travel. According to the Police Accident Report, the driver of the case vehicle made no pre-crash avoidance maneuvers. The case vehicle continued straight ahead prior to impact. According to the Police Accident Report and the interview with the driver of vehicle #2, vehicle #2 made no pre-crash avoidance maneuvers and remained stopped waiting to make a left-hand turn prior to impact. According to the Police Accident Report, the driver of vehicle #3 made no pre-crash avoidance maneuvers. Vehicle #3 continued straight ahead prior to impact. The accident occurred in the northwestbound, left-hand, turn lane.

**Crash:** According to the vehicle inspection and the on-scene Police photographs, the front left of the case vehicle impacted the back right of vehicle #2 causing the case vehicle's driver side supplemental restraint (air bag) to deploy. Vehicle #2 was knocked northwestward approximately 53 meters (175 feet) and rotated approximately fifteen degrees clockwise after impact and came to rest heading north-northwest, straddling the solid double yellow center lines which separated the inside, northwestbound lane from the southeastbound, left-hand, turn lane. After impact the case vehicle continued west-northwest approximately 16 meters (52 feet) and rotated approximately 15 degrees counterclockwise. Subsequently,

<sup>7</sup> The Police investigation (see Appendix R, FATAL TRAFFIC CRASH REPORT: BY THE POLICE DEPARTMENT, pages 142R, 148R, and 152R) obtained two witness speed estimates for the case vehicle. One estimate was 40-48 k.p.h. (25-30 m.p.h.); the other estimate was 48-56 k.p.h. (30-35 m.p.h.).

## COLLISION SEQUENCE (CONTINUED)

## Crash: (Continued)

the front right of the case vehicle impacted the front left of vehicle #3 in the inside, southeastbound lane. Both the case vehicle and vehicle #3 came to rest in the middle of the intersection near their the point of impact. The case vehicle rotated approximately five degrees counterclockwise and came to rest heading west-northwest. Vehicle #3 rotated less than five degrees clockwise and came to rest heading south-southeast.

## Post-Crash:

**Occupants:** According to the Police Accident Report, the driver of the case vehicle remained inside the vehicle at final rest. She was unconscious<sup>8</sup> and was unable because of her injuries to exit the case vehicle. According to the interview with the driver of vehicle #2, all four of its occupants remained inside the vehicle at final rest and were conscious and able to exit the case vehicle. According to the Police Accident Report, the case vehicle's driver was not wearing the available, active, three-point lap and shoulder belt. According to the Police Accident Report and the interview with the driver of vehicle #2, all four occupants of vehicle #2 were using their available three-point lap and shoulder belts.

**Police:** The investigating police agency was notified of the accident within one minute and arrived on-scene within an unknown number of minutes. According to the Emergency Medical Record, the ambulance arrived within four minutes of the crash. Traffic control procedures were established and emergency medical, fire, and towing services were called to assist.

**Rescue:** According to the Emergency Medical Record, the driver was transported by ambulance to a medical facility where she was pronounced dead. According to her autopsy, she sustained fatal injuries which included: lacerations to her brain stem, aorta, and liver, a subarachnoid hemorrhage, a fractured sternum, multiple rib fractures, a fracture/dislocation at C<sub>1</sub>/C<sub>2</sub>, and multiple soft tissue injuries.

**Removal:** Following the police investigation, the case vehicle and vehicle #2 were towed from the scene. According to the Police Accident Report, vehicle #3 was not towed.

## HUMAN FACTORS/OCCUPANT DATA

	<u>Case Vehicle</u>	<u>Vehicle #2</u>	<u>Vehicle #3</u>
<u>DRIVERS:</u>	51 year-old female	45 year-old female	37 year-old male

<sup>8</sup> According to the emergency medical technicians arriving on the scene, the case vehicle driver was outside the vehicle being administered cardiopulmonary respiration (CPR) by a bystander upon their arrival.

## HUMAN FACTORS/OCCUPANT DATA (CONTINUED)

<u>DRIVERS:</u> (Continued)	<u>Case Vehicle</u>	<u>Vehicle #2</u>	<u>Vehicle #3</u>
Height:	163 cm (64 in)	160 cm (63 in)	185 cm (73 in)
Weight:	67 kg (148 lbs)	50 kg (110 lbs)	79 kg (175 lbs)
Occupation:	School bus driver	Teacher	Repair technician
Active Restraint System/Usage:	3-point lap and shoulder/Not used	None/Not applicable	3-point lap and shoulder/Used
Usage Source:	Vehicle inspection and Police Accident Report	Police Accident Report and vehicle specifications	Police Accident Report
Passive Restraint System/Usage:	Factory installed air bag/air bag deployed	Factory installed air bag/air bag did not deploy in the rear-end collision; 3-point lap and shoulder/Used	Not applicable
Usage Source:	Vehicle inspection and Police Accident Report	Interview and Police Accident Report	Not applicable
Eye glasses/contacts:	Eyeglasses	None	Eyeglasses
Vehicle Familiarity:	Approximately five years	A few days and approximately 80 km (50 mi)	Unknown
Route Familiarity:	Daily	Very infrequently	Unknown
Trip Plan:	Work to home	Restaurant to mother's house	Work to service call
Manner of Leaving Scene:	Ambulance	Ambulance	Drove vehicle from scene
Type of Medical Treatment:	Pronounced dead at hospital	Hospitalized and treatment later	Declined medical assistance at scene
	<u>Vehicle #2 Right Front Passenger</u>	<u>Vehicle #2 Left Rear Passenger</u>	<u>Vehicle #2 Right Rear Passenger</u>
<u>PASSENGERS:</u>	20 year-old female	16 year-old female	13 year-old male
Height:	173 cm (68 in)	155 cm (61 in)	173 cm (68 in)

## HUMAN FACTORS/OCCUPANT DATA (CONTINUED)

<u>PASSENGERS:</u> (Continued)	<u>Vehicle #2 Right Front Passenger</u>	<u>Vehicle #2 Left Rear Passenger</u>	<u>Vehicle #2 Right Rear Passenger</u>
Weight:	50 kg (110 lbs)	45 kg (100 lbs)	54 kg (120 lbs)
Active Restraint System/Usage:	None/not applicable	3-point lap and shoulder/Used	3-point lap and shoulder/Used
Usage Source:	Not applicable	Interviewee, Police Accident Report	Interviewee, Police Accident Report
Passive Restraint System/Usage:	3-point lap and shoulder/Used	None	None
Usage Source:	Interviewee, Police Accident Report	Not applicable	Not applicable
Eye glasses/contacts:	Unknown	Not applicable	Not applicable
Manner of Leaving Scene:	Relative	Ambulance	Relative
Type of Medical Treatment:	Treatment later	Treated and released	Treatment later

CASE VEHICLE DRIVER INJURIES<sup>9,10</sup>

<u>Description of Injury</u>	<u>A.I.S.</u>	<u>Source of Data</u>	<u>Injury Mechanism</u>	<u>Certainty</u>
Laceration brain stem @ pontomedullary junction	140212.6,8	1	Air bag, driver side	{Probable}
Subarachnoid hemorrhage @ base of brain	140684.3,9 <sup>9</sup>	1	Air bag, driver side	{Probable}
Lacerations aorta--blood not confined to medianstinum	420218.6,4	1	Air bag compartment cover	{Probable} <sup>10</sup>
Lacerations liver	541822.2,1	1	Steering wheel rim	{Probable}

<sup>9</sup> The subarachnoid hemorrhage was most likely in the cerebrum rather than in the cerebellum; unknown aspect was coded because the only allowed choices are right versus left.

<sup>10</sup> These injuries are assigned a "probable" certainty because of the severe loading that occurred to the steering wheel (i.e., the shear capsule was completely separated from its mount). The case vehicle's driver clearly loaded the steering column during the crash; the most severe loading most likely occurred during the first impact. This contractor believes that the air bag cover flaps most likely did not break at their pre-stressed locations because the case vehicle driver was over the hub when the air bag deployed. As a result the air bag cover was blown into the central, superior chest most likely causing the rib and sternum fractures and the lacerations to the aorta.

CASE VEHICLE DRIVER INJURIES (CONTINUED)<sup>11,12,13,14</sup>

<u>Description of Injury</u>	<u>A.I.S.</u>	<u>Source of Data</u>	<u>Injury Mechanism</u>	<u>Certainty</u>
Fractures, ribs, 1st-4th on right and 1st-3rd on left	450240.4,3	1	Air bag compartment cover	{Probable} <sup>10</sup>
Fractured sternum @ 4th intercostal space	450804.2,4	1	Air bag compartment cover	{Probable} <sup>10</sup>
Fracture and dislocation @ C1/C2 <sup>11</sup>	650228.3,6	1	Front header	{Possible} <sup>12</sup>
Abrasion below left ear	190202.1,2	1	Windshield	{Probable}
Abrasion left maxillary area	290202.1,2	1	Windshield	{Probable}
Abrasion lower lip	290202.1,8	1	Windshield	{Probable}
Abrasion chin	290202.1,8	1	Zipper on driver's jacket <sup>13</sup>	{Certain}
Contusion nose	290402.1,4	1	Windshield	{Probable}
Contusion lower lip	290402.1,8	1	Windshield	{Probable}
Lacerations to lower lip and right and left mouth @ the angles	290602.1,8	1	Windshield	{Probable}
Abrasions whole neck <sup>14</sup>	390202.1,0	1	Driver air bag	{Certain}
Contusions right and left breast	490402.1,4	1	Air bag compartment cover	{Probable} <sup>10</sup>
Contusion upper abdomen	590402.1,7	1	Steering wheel rim	{Probable}
Abrasions right flank	590202.1,1	1	Floor mounted transmission selector lever	{Possible}
Abrasions left fingers	790202.1,2	1	Driver air bag	{Probable}
Abrasions right fingers	790202.1,1	1	Driver air bag	{Probable}
Contusion right thigh	890402.1,1	1	Steering wheel rim	{Possible}

<sup>11</sup> The autopsy did not specifically indicate whether or not a lesion to the spinal cord occurred; however, the upper cord was noted to be "soft".

<sup>12</sup> See SELECTED PHOTOGRAPHS #43 and #44; the presence of hair on the front header indicates a strong possibility that the case vehicle driver's neck was snapped backwards on impact with the header and thereby enabling the driver's face and mouth area to impact the windshield. It must be noted that there are no lesions on the forehead. On the other hand, it is entirely possible that the cervical fracture and dislocation resulted from the force of the air bag's deployment.

<sup>13</sup> See SELECTED PHOTOGRAPH #50.

<sup>14</sup> See SELECTED PHOTOGRAPH #49.



## VEHICLE #2 DRIVER INJURIES

<u>Description of Injury</u>	<u>A.I.S.</u>	<u>Source of Data</u>	<u>Injury Mechanism</u>	<u>Certainty</u>
Contusion kidneys (i.e., blood in urine)	541610.2,9	7	Seat back	{Probable}
Strain, cervical	640278.1,6	7	Noncontact flexion, extension	{Probable}
Strain, right hip	840602.1,1	7	Noncontact flexion, extension	{Probable}
Strain, right foot	840602.1,1	7	Brake pedal	{Possible}

## VEHICLE #2 RIGHT FRONT PASSENGER INJURIES

<u>Description of Injury</u>	<u>A.I.S.</u>	<u>Source of Data</u>	<u>Injury Mechanism</u>	<u>Certainty</u>
Strain, cervical	640278.1,6	7	Noncontact flexion, extension	{Probable}

VEHICLE #2 LEFT REAR PASSENGER INJURIES<sup>15</sup>

<u>Description of Injury</u>	<u>A.I.S.</u>	<u>Source of Data</u>	<u>Injury Mechanism</u>	<u>Certainty</u>
Strain, cervical	640278.1,6	7	Noncontact flexion, extension	{Probable}
Contusion right knee	890402.1,1	7	Driver's seat <sup>15</sup>	{Probable}
Sprain, right ankle	850206.1,1	7	Driver's seat <sup>15</sup>	{Probable}

## VEHICLE #2 RIGHT REAR PASSENGER INJURIES

<u>Description of Injury</u>	<u>A.I.S.</u>	<u>Source of Data</u>	<u>Injury Mechanism</u>	<u>Certainty</u>
Strain, cervical	640278.1,6	7	Noncontact flexion, extension	{Probable}

<sup>15</sup> According to the driver of the case vehicle, the frame of the driver's seat broke free from its floor mounts and moved backwards striking the left rear occupant's right lower leg. This contractor was not able to obtain any information pertaining to vehicle #2 because the [REDACTED] which owned the vehicle declined to cooperate with this investigation.

## DRIVER KINEMATICS

The initial posture of the case vehicle driver, just prior to the first impact along the pre-crash path (i.e., as she was proceeding in a northwesterly direction in the left turn lane), is not known. Considerable inquiry regarding the driver's pre-crash health and/or posture was made by the Police and reported in their final investigative report; see APPENDIX R. According to the witnesses statements included in the police investigation, scene evidence, and damage locations on both vehicles (i.e., primary contact area was the front left half on the case vehicle and the back right half on vehicle #2), the driver of vehicle #2 had just stopped, waiting for traffic to clear in order to turn left, when the front of the case vehicle collided with the back of vehicle #2 resulting in an rear-end impact configuration (i.e., primarily a 12 o'clock force direction for the case vehicle and 6 o'clock force direction for vehicle #2).

Based on the vehicle and scene inspections and occupant kinematic principles, the case vehicle's impact with vehicle #2 not only deployed the driver's side air bag but would have caused the case vehicle driver to be thrown forward resulting in contact with the deploying air bag. This forward movement combined with (1) the driver's short stature [163 centimeters (64 inches)], (2) close proximity to steering wheel (i.e., during the vehicle inspection, the driver's seat was found located midway between the forward most and middle track positions), and (3) lack of seatbelt useage most likely contributed to the driver's chest and head injuries since the steering wheel was completely collapsed<sup>16</sup> inward and upward into the dashboard. The driver's contact with the deploying air bag combined with the driver's forward movement appears to have caused the driver's upward movement into the front windshield header (i.e., hair strands) and most likely the windshield (spider web) prior to the collision with vehicle #3. The upward thrust would help to account for the liver lacerations and abdominal bruising which most likely occurred when the driver contacted the bottom of the steering wheel rim.

The performance of the case vehicle's driver side supplemental restraint system (air bag) is in question because the air bag's cover was completely blown off the steering wheel hub after the flap covers failed to fully open (see SELECTED PHOTOGRAPHS #39, #40, and #41). In the opinion of this contractor, the case vehicle's driver was leaning over the air bag module when it deployed. Why she was over the module is discussed below in the DISCUSSION section. The presence of the driver already leaning over the steering hub helps explain how the air bag pushed the driver's jacket zipper up into her chin just below her lower lip (see SELECTED PHOTOGRAPH #50). In addition, the air bag showed evidence of mucous and what appeared to be skin on the bag itself, most likely from the drivers neck, chin, and lower lip. After striking the windshield, the case vehicle driver most likely moved downward and rearward toward the back of her seat as the case vehicle veered slightly westward after its initial impact.

Based on the case vehicle's inspection, occupant kinematic principles, and on-scene photographs of vehicle #3's bumper damage (see SELECTED PHOTOGRAPH #14), the case vehicle's subsequent impact with vehicle #3 was a relatively low speed impact. The driver's seating posture immediately prior to this impact is not known but this contractor believes that she was unconscious and slumped forward. The second impact also caused the case vehicle driver to move forward and

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<sup>16</sup> It must be noted that the case vehicle's second impact with vehicle #3 was not severe enough for the steering column to be completely sheared; so, most likely the steering column was significantly loaded during the initial impact. Extraction can also be ruled out as a possible source of the steering column's movement since the emergency medical technicians as well as the interviewed witnesses all report that bystanders at the scene removed the case vehicle driver from her car prior to the arrival of fire and rescue personnel.

## DRIVER KINEMATICS (CONTINUED)

impact the steering column again. This second impact to the steering column may have helped to completely detach it from the shear capsule.

After impacting the steering column the second time, the case vehicle driver moved toward the right. According to the eyewitness statements in the police report (see **Appendix R**), the driver was found slumped forward with her left shoulder against the steering wheel and her head down on the center console. This witness also stated that she did not recall having to unbuckle the seatbelt from the case vehicle's driver.

## DISCUSSION

The exact occupant kinematics involved in this crash are complex since there are several unanswered questions regarding (1) why the driver was already over the air bag module when it deployed, (2) why the air bag cover flaps did not fully open, and (3) at what point or points did the collapsing of the steering column occur. These unanswered questions lead to several different scenarios.

According to the eyewitness and other statements reported in the police investigation (see **Appendix R**) along with the absence of pre-impact skid marks, the case vehicle's driver most likely never perceived the impending impact, due to the fact that the driver was reportedly feeling ill (i.e., weak and tired) on the day of the crash. The police investigation found that in the preceeding weeks the case vehicle's driver had on one occasion talked of a back injury and had stated that she suffered several episodes of fainting following the back injury. According to those who gave statements to the police, the driver had also been taking medication for pneumonia which she indicated, according to the statements, made her ill. The driver of vehicle #3 stated that as he witnessed the first collision he recalled seeing the airbag but never saw the driver, a possible indication that the driver was slumped over prior to the crash with vehicle #2. The police investigation was not able to conclude that the driver was incapacitated prior to the initial collision. Based upon the results of a pathological examination, no evidence (except caffeine) of drugs or alcohol was found in the blood or vitreous fluid exams.

Another "*less likely*"<sup>17</sup> scenario was that the case vehicle's driver was hurrying to catch the left turn arrow and sped up thinking that vehicle #2 was going to turn ahead of her. When vehicle #2 did not turn left, but rather waited, the case vehicle driver was unable to avoid the crash. It is possible that the case vehicle driver attempted brake at the last moment causing her torso to move forward onto the steering wheel. In this scenario, the case vehicle driver's late braking may have been so late that the wheels did not have time to lock, thus explaining the lack of scene evidence.

The third scenario involves the yielding nature of the case vehicle's impact with vehicle #2. Air bag deployments resulting from crashes into fixed barriers have been well documented. Howev-

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<sup>17</sup> For this scenario to have occurred, this contractor would have expected that the damage to the case vehicle would have shown a mismatch of the bumpers at the point of impact. However, based on our inspection of the case vehicle and the police photographs of vehicle #2, the evidence indicates that the bumpers matched-up at impact.

## DISCUSSION (CONTINUED)

er, if a vehicle strikes a much softer object, like the rear of another car<sup>18</sup>, the possibly exists that an unrestrained occupant will move forward prior to the deployment of the air bag.

A final scenario combines the scenario involving the driver incapacitated and leaning toward the steering wheel hub with one of the scenarios involving the longitudinal acceleration of the driver toward the air bag module. This scenario may best explain the lack of pre-crash evasive action and the match-up of the bumpers at impact with complete separation of the steering column shear capsule.

The investigation indicates that the case vehicle's driver was not using the available safety belts. The evidence of occupant contact to the front header and windshield, coupled with the pattern of injuries to the driver, strongly indicates that the driver was in close proximity to the air bag at the time of deployment. Precisely how she arrived at this position cannot be positively determined, although, the above scenarios provide possible explanations.

## CASE VEHICLE AIR BAG SYSTEM

DRIVER AIR BAG

Airbag Diameter (seam-to-seam, deflated):	66 centimeters (26.0 inches)
Number of Vent Holes:	Two
Vent Hole Diameter:	2 centimeters (0.8 inches)
Vent Hole Clock Positions:	Three and nine o'clock {Note: in the field, the actual determined positions were three and eight o'clock; however, nine o'clock is more likely}
Distance from cover flap to center of seat back:	61 centimeters (24.0 inches)
Generant Residue:	No unusual amount found

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<sup>18</sup> Vehicle #2 was propelled forward 53 meters (175 feet) to its final rest position.

ACCIDENT COLLISION MEASUREMENT TABLE

## ACCIDENT COLLISION MEASUREMENT TABLE

**NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM**

Primary Sampling Unit Number 10

Case Number—Stratum 9505

### ACCIDENT COLLISION DIAGRAM

Document the physical plant:

- all road/roadway delineation (e.g., curbs/edge lines, lane markings, median markings, pavement markings, parked vehicles, poles, signs, etc.)
- all traffic controls (e.g., speed limit)
- north arrow placed on diagram
- roadway surface type and condition of applicable roadways
- grade measurements for all applicable roadways and at location of rollover initiation
- roadway curvature

Document vehicle dynamics including:

- reference point and reference line relative to physical features present at the scene
- scaled documentation of all accident induced physical evidence
- scaled documentation of all roadside objects contacted
- scaled representations of the vehicle(s) at pre-impact, impact, and final rest based upon either:
  - a) physical evidence, or
  - b) reconstructed accident dynamics

## CRASH DATA

VEH. #1    VEH. #2    VEH. #3

Heading Angle 321 321 144

Surface Type Bituminous

Surface Condition DRY DRY DRY

Coefficient of Friction

Grade (v/h)  
Measurement \_\_\_\_\_  
(between impact  
and final rest)

Grade (v/h) N/A N/A N/A  
Measurement  
(at location of  
rollover initiation)

Reference Point: \_\_\_\_\_ Reference line: \_\_\_\_\_

[illegible]

[illegible]

**Appendix A:**

**POLICE ACCIDENT REPORT**



FOR YRS COMPLETE COMMERCIAL VEHICLE AREA ON BACK OF FORM

DIAGRAM


 INDICATE NORTH  
BY ARROW

See Attached Page

## NARRATIVE (Refer to vehicle by Unit No.)

Unit #2 stopped on W/B Rt # [redacted] at [redacted] Av.  
 attempting to turn left, into S/B [redacted] Av.  
 Unit #1, W/B in the turn lane of Rt # [redacted] struck  
 the rear of Unit #2 and projected it W/B.  
 Unit #1 continued W/B and collided with the  
 front of Unit #3, which was S/B in the  
 centerlane of Rt # [redacted]. Units #1 and #2  
 sustained extensive damage. Unit #3 had  
 minor damage. Driver #3 and witness stated

LOCAL USE ONLY

 Unit Color Red Unit Color White  
 Unit Towed By / To [redacted]

Unit Towed By / To [redacted]

COPY

## COMMERCIAL VEHICLE R

UNIT NO. \_\_\_\_\_

CARRIER NAME \_\_\_\_\_

SOURCE

- ☐
- Side of truck
- 
- ☐
- Papers
- 
- ☐
- Driver
- 
- ☐
- Log book

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_

ZIP \_\_\_\_\_

OWNER \_\_\_\_\_

ID NUMBER  
US DOT \_\_\_\_\_

ICCMC \_\_\_\_\_

or State No. \_\_\_\_\_

Sub name \_\_\_\_\_

☐ None

HAZARDOUS MATERIALS:

PLACARDED? ☐ Yes ☐ No

# Year: 4-Digit \_\_\_\_\_

or Name \_\_\_\_\_

1-Digit \_\_\_\_\_

Hazardous cargo released from truck? ☐ Y ☐ N ☐ UnkViolation of HAZMAT regs. contribute to crash? ☐ Y ☐ N ☐ UnkViolation of MCS regs. contribute to crash? ☐ Y ☐ N ☐ UnkInspection form completed? ☐ Y ☐ N ☐ UnkHAZMAT ☐ Y ☐ N ☐ UnkMCS ☐ Y ☐ N ☐ UnkOut of Service? ☐ Y ☐ N ☐ UnkOut of Service? ☐ Y ☐ N ☐ Unk

DOT PERMIT # \_\_\_\_\_

TRAILER WIDTH (in)

6-00" 67-102" Over 102"

Trailer 1 ☐ ☐ ☐Trailer 2 ☐ ☐ ☐

TRAILER LENGTH (in) - R

Trailer 1 \_\_\_\_\_








Trailer 2 \_\_\_\_\_

VEHICLE LENGTH (TOTAL) - ft

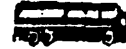
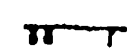






NO. OF AXLES

IN CITY OF / NEAREST CITY: \_\_\_\_\_ Miles N E S W of: (Circle)

## VEHICLE CONFIGURATION (Circle Applicable Number)

1  Bus	4  Truck/trailer	7  Tractor/doubles
2  Single unit truck, 2 axle, 6 ft	5  Truck/tractor	
3  Single unit truck, 2 or more axle	6  Tractor/semi-trailer	9 Unknown Heavy Truck

## CARGO BODY TYPE (Circle Applicable Number)

1  Bus	4  Flatbed	7  Auto transporter
2  Van/enclosed box	5  Dump	8  Garbage/refuse
3  Cargo tank	6  Concrete mixer	9 Unknown

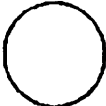
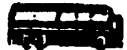







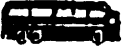
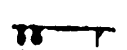






20-A

Sheet 2 of 2 Sheets

BEST AVAILABLE COPY

**FOR INFORMATION ONLY**

SEE YES COMPLETE COMMERCIAL VEHICLE AREA ON BACK OF FORM

DIAGRAM		COMMERCIAL VEHICLE		UNIT NO. <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span>	
 INDICATE NORTH BY ARROW		CARRIER NAME <span style="border-bottom: 1px solid black; display: inline-block; width: 150px;"></span>		SOURCE	
		ADDRESS <span style="border-bottom: 1px solid black; display: inline-block; width: 150px;"></span>		<input type="checkbox"/> Site of truck <input type="checkbox"/> Papers <input type="checkbox"/> Driver <input type="checkbox"/> Log book	
		CITY <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span>	STATE <span style="border-bottom: 1px solid black; display: inline-block; width: 20px;"></span>	ZIP <span style="border-bottom: 1px solid black; display: inline-block; width: 20px;"></span>	GWR
		ID NUMBER <span style="border-bottom: 1px solid black; display: inline-block; width: 100px;"></span> US DOT <span style="border-bottom: 1px solid black; display: inline-block; width: 100px;"></span> ICCMC <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span>			
		or State No. <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span> State name <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span> <input type="checkbox"/> None			
HAZARDOUS MATERIALS:		PLACARDED? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If Yes: 4-Digit <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span> or Name <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span> 1-Digit <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span>					
Hazardous cargo released from truck? <input type="checkbox"/> Y <input type="checkbox"/> N Unk <small>(do not count fuel from vehicle fuel tank)</small> Violation of HAZMAT regs. contribute to crash? <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Unk Violation of MCS regs. contribute to crash? <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Unk Inspection form completed? <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Unk		Form No. <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span>			
- HAZMAT <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Unk Out of Service? <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Unk - MCS <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Unk Out of Service? <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Unk					
DOT PERMIT # <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span>					
TRAILER WIDTH(S) 0-6' 6'-10' Over 10'		TRAILER LENGTH(S) - ft Trailer 1 <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span> Trailer 2 <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span>			
Trailer 1 <input type="checkbox"/> 0-6' <input type="checkbox"/> 6'-10' <input type="checkbox"/> Over 10' Trailer 2 <input type="checkbox"/> 0-6' <input type="checkbox"/> 6'-10' <input type="checkbox"/> Over 10'		VEHICLE LENGTH (TOTAL) - ft NO. OF AXLES			
<input type="checkbox"/> IN CITY OF / <input type="checkbox"/> NEAREST CITY: <span style="border-bottom: 1px solid black; display: inline-block; width: 100px;"></span> Miles N E S W of: (Circle)					
VEHICLE CONFIGURATION (Circle Applicable Number)					
<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;">           1  Bus         </div> <div style="width: 33%;">           4  Truck/trailer         </div> <div style="width: 33%;">           7  Tractor/doubles         </div> <div style="width: 33%;">           2  Single unit truck, 2 axle, 8 ft         </div> <div style="width: 33%;">           5  Truck/tractor         </div> <div style="width: 33%;">           8  Tractor/semitrailer         </div> <div style="width: 33%;">           3  Single unit truck, 3 or more axle         </div> <div style="width: 33%;">           6  Tractor/semitrailer         </div> <div style="width: 33%;">           9 Unknown Heavy Truck         </div> </div>					
CARGO BODY TYPE (Circle Applicable Number)					
<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;">           1  Bus         </div> <div style="width: 33%;">           4  Flatbed         </div> <div style="width: 33%;">           7  Auto transporter         </div> <div style="width: 33%;">           2  Van/enclosed box         </div> <div style="width: 33%;">           5  Dump         </div> <div style="width: 33%;">           8  Garbage/refuse         </div> <div style="width: 33%;">           3  Cargo tank         </div> <div style="width: 33%;">           6  Concrete mixer         </div> <div style="width: 33%;">           9 Unknown         </div> </div>					
NARRATIVE (Refer to vehicle by Unit No.)  <u>Unit #1 made no attempt to stop.</u>            		LOCAL USE ONLY          			
Color <input checked="" type="checkbox"/> White <input type="checkbox"/> Other <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span>		Towed by / to <span style="border-bottom: 1px solid black; display: inline-block; width: 100px;"></span>			
Towed by / to <span style="border-bottom: 1px solid black; display: inline-block; width: 100px;"></span>		Towed by / to <span style="border-bottom: 1px solid black; display: inline-block; width: 100px;"></span>			

COPY

21-A

## **Appendix B:**

### **RECONSTRUCTION ALGORITHM PROGRAM RESULTS:**

#### **OLDMISS, CRASHPC, AND EDCRASH**

The EDCRASH reconstruction program was used and its results are presented for comparison purposes. The EDCRASH run presented is comparable to the OLDMISS reconstruction program.



# OLDMISS PROGRAM SUMMARY

(All Measurements in Metric)

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

Identifying Title			
<u>10</u> Primary Sampling Unit	<u>9505</u> Case No.-Stratum	<u>01</u> Accident Event Sequence No.	_____ Date (Month, day, year) of Run
OLDMISS Vehicle Identification			
Vehicle 1	<u>90</u> Year	<u>Cadillac</u> Make	<u>Eldorado</u> Model
Vehicle 2	<u>94</u> Year	<u>Oldsmobile</u> Make	<u>Ciera S</u> Model
			<u>1</u> NASS Veh. No.
GENERAL INFORMATION			
VEHICLE 1		VEHICLE 2	
Size <u>3</u>		Size <u>3</u>	
Weight <u>1554</u> + <u>167</u> + _____ = <u>1621</u> kg Curb Occupant(s) Cargo		Weight <u>1303</u> + <u>213</u> + _____ = <u>1516</u> kg Curb Occupant(s) Cargo	
Damaged Area of Vehicle (F = Front, L = Left, R = Right, B = Back)  <u>F</u> Vehicle 1		Damaged Area of Vehicle (F = Front, L = Left, R = Right, B = Back)  <u>B</u> Vehicle 2	
Vehicle Heading Angles At Impact, in Degrees  + <u>321</u> ° Vehicle 1		Vehicle Heading Angles At Impact, in Degrees  + <u>321</u> ° Vehicle 2	
Stiffness Category for Vehicle  <u>9</u> Vehicle 1		Stiffness Category for Vehicle  <u>3</u> Vehicle 2	
DAMAGE INFORMATION			
For Which Vehicle Is The Damage Known <u>1</u>		Crush Measurements	
PDOF for Known Vehicle in Degrees (-180 to +180) ± <u>00</u> °		Known Vehicle	
Damage Length (L) for Known Vehicle <u>158</u> cm		C <sub>1</sub> <u>22</u> cm	
		C <sub>2</sub> <u>18</u> cm	
		C <sub>3</sub> <u>16</u> cm	
		C <sub>4</sub> <u>14</u> cm	
		C <sub>5</sub> <u>11</u> cm	
		C <sub>6</sub> <u>8</u> cm	
		Damage Midpoint Offset for Known Vehicle D ⊖ <u>42</u> cm	
		Estimated Damage Midpoint Offset for Unknown Vehicle D ⊕ <u>40</u> cm	

# SUMMARY OF OLDMISPC RESULTS

Case Number 95-05

## SPEED CHANGE (DAMAGE)

	RESULTANT MPH (KPH)	LONGITUDINAL MPH (KPH)	LATERAL MPH (KPH)	PDOF DEG
VEH #1 (KNOWN)	13.15 ( 21.16)	-13.15 (-21.16)	.00 ( .00)	.00
VEH #2 (ESTIMATED)	14.06 ( 22.63)	14.06 ( 22.63)	.00 ( .00)	180.00

	ENERGY FT-LBS (NT-M)	FORCE LBS (NT)
VEH #1 (KNOWN)	24293.8 ( 32934.7)	36956.8 (164383.6)
VEH #2 (ESTIMATED)	21173.5 ( 28704.6)	36956.8 (164383.7)

## SUMMARY OF DAMAGE DATA

VEHICLE #1 (KNOWN DAMAGE DIMENSION)			VEHICLE #2 (ESTIMATED DAMAGE DIMENSION)		
	IN	(CM)		IN	(CM)
L-----	62.2	158.0	L-----	62.2	158.0
C1-----	8.7	22.1	C1-----	6.7	17.1
C2-----	7.1	18.0	C2-----	5.3	13.5
C3-----	6.3	16.0	C3-----	4.6	11.8
C4-----	5.5	14.0	C4-----	3.9	10.0
C5-----	4.3	10.9	C5-----	2.9	7.3
C6-----	3.1	7.9	C6-----	1.8	4.7
D-----	-16.5	-41.9	D-----	5.2	13.2

(DOFF ADJUSTED -10.5 INCHES  
TO MATCH VEHICLE DIMENSION)

## VEHICLE INFORMATION

VEHICLE #1 (FRONT DAMAGE KNOWN)		VEHICLE #2 (REAR DAMAGE UNKNOWN)	
SIZE-----	3	SIZE-----	3
STIFFNESS-	9	STIFFNESS-	3
SIDE-----	F	SIDE-----	B
HANGL-----	321.0 DEG	HANGL-----	321.0 DEG
WEIGHT----	3574.0 LBS (1620.9 KG)	WEIGHT----	3342.0 LBS (1515.6 KG)
MASS-----	9.250 LB-SEC**2/IN	MASS-----	8.649 LB-SEC**2/IN
	( 104.50 NT-SEC**2/CM)		( 97.72 NT-SEC**2/CM)
RADIUS		RADIUS	
GYRATION--	3324.0 IN**2	GYRATION--	3324.0 IN**2
	( 21445.1 CM**2)		( 21445.1 CM**2)



U.S. Department of Transportation  
National Highway Traffic Safety  
Administration

# CRASHPC PROGRAM SUMMARY

(All Measurements in Metric)

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

<b>Identifying Title</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> <u>10</u> Primary Sampling Unit         </div> <div style="width: 20%;"> <u>9505</u> Case No.-Stratum         </div> <div style="width: 20%;"> <u>01</u> Accident Event Sequence No.         </div> <div style="width: 40%; border-bottom: 1px solid black;">           Date (Month, day, year) of Run         </div> </div>			
<b>CRASHPC Vehicle Identification</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;">           Vehicle 1 <u>90</u> Year         </div> <div style="width: 20%;"> <u>CADILLAC</u> Make         </div> <div style="width: 20%;"> <u>ELDORADO</u> Model         </div> <div style="width: 40%;"> <u>1</u> NASS Ven. No.         </div> </div>			
GENERAL INFORMATION			
VEHICLE 1		VEHICLE 2	
Size <u>3</u>	Size <u>11</u>		
Weight <u>1554</u> + <u>67</u> + <u>        </u> = <u>1621</u> kg	Weight <u>        </u> + <u>        </u> + <u>        </u> = <u>        </u> kg		
Curb    Occupant(s)    Cargo	Curb    Occupant(s)    Cargo		
CDC <u>12 F Y E W 1</u>	CDC <u>        </u>		
PDOF (-180 to +180) <u>        </u> °	PDOF (-180 to +180) <u>        </u> °		
Stiffness <u>9</u>	Stiffness <u>        </u>		
SCENE INFORMATION			
Rest and Impact Positions <input checked="" type="checkbox"/> No. Go To Damage Information <input type="checkbox"/> Yes			
VEHICLE 1		VEHICLE 2	
Rest Position X <u>        </u> m	Rest Position X <u>        </u> m		
Y <u>        </u> m	Y <u>        </u> m		
PSI <u>        </u> °	PSI <u>        </u> °		
Impact Position X <u>        </u> m	Impact Position X <u>        </u> m		
Y <u>        </u> m	Y <u>        </u> m		
PSI <u>        </u> °	PSI <u>        </u> °		
Slip Angle (-180 to +180) <u>        </u> °	Slip Angle (-180 to +180) <u>        </u> °		
VEHICLE MOTION			
Sustained Contact <input type="checkbox"/> No <input type="checkbox"/> Yes			
VEHICLE 1		VEHICLE 2	
Vehicle Rotation <input type="checkbox"/> No <input type="checkbox"/> Yes	Vehicle Rotation <input type="checkbox"/> No <input type="checkbox"/> Yes		
Rotation Stop Before Rest <input type="checkbox"/> No <input type="checkbox"/> Yes	Rotation Stop Before Rest <input type="checkbox"/> No <input type="checkbox"/> Yes		
End of Rotation Position X <u>        </u> m	End of Rotation Position X <u>        </u> m		
Y <u>        </u> m	Y <u>        </u> m		
PSI <u>        </u> °	PSI <u>        </u> °		
Curved Path <input type="checkbox"/> No <input type="checkbox"/> Yes	Curved Path <input type="checkbox"/> No <input type="checkbox"/> Yes		
Point on Path X <u>        </u> m Y <u>        </u> m	Point on Path X <u>        </u> m Y <u>        </u> m		
Rotation Direction <input type="checkbox"/> None <input type="checkbox"/> CW <input type="checkbox"/> CCW	Rotation Direction <input type="checkbox"/> None <input type="checkbox"/> CW <input type="checkbox"/> CCW		
Rotation > 360° <input type="checkbox"/> No <input type="checkbox"/> Yes	Rotation > 360° <input type="checkbox"/> No <input type="checkbox"/> Yes		



## National Accident Sampling System-Crashworthiness Data System: CRASHPC Program Summary

## FRICTION INFORMATION

Coefficient of Friction \_\_\_\_\_

Rolling Resistance Option \_\_\_\_\_

## Vehicle 1 Rolling Resistance

 LF \_\_\_\_\_ RF \_\_\_\_\_  
 LR \_\_\_\_\_ RR \_\_\_\_\_

## Vehicle 2 Rolling Resistance

 LF \_\_\_\_\_ RF \_\_\_\_\_  
 LR \_\_\_\_\_ RR \_\_\_\_\_

## TRAJECTORY INFORMATION

Trajectory Data ☐ No ☐ Yes

If No, Go To Damage Information

## Vehicle 1 Steer Angles

 LF \_\_\_\_\_ ° RF \_\_\_\_\_ °  
 LR \_\_\_\_\_ ° RR \_\_\_\_\_ °

## Vehicle 2 Steer Angles

 LF \_\_\_\_\_ ° RF \_\_\_\_\_ °  
 LR \_\_\_\_\_ ° RR \_\_\_\_\_ °
Terrain Boundary ☐ No ☐ Yes

## First Point

X \_\_\_\_\_ m Y \_\_\_\_\_ m

## Second Point

X \_\_\_\_\_ m Y \_\_\_\_\_ m

Secondary Coefficient of Friction \_\_\_\_\_

## DAMAGE INFORMATION

## VEHICLE 1

Damage Length L 158 cm
 Crush Depths C<sub>1</sub> 22 cm  
 C<sub>2</sub> 78 cm  
 C<sub>3</sub> 16 cm  
 C<sub>4</sub> 14 cm  
 C<sub>5</sub> 11 cm  
 C<sub>6</sub> 8 cm
Damage Offset D ± 42 cm

## VEHICLE 2

Damage Length L \_\_\_\_\_ cm

 Crush Depths C<sub>1</sub> \_\_\_\_\_ cm  
 C<sub>2</sub> \_\_\_\_\_ cm  
 C<sub>3</sub> \_\_\_\_\_ cm  
 C<sub>4</sub> \_\_\_\_\_ cm  
 C<sub>5</sub> \_\_\_\_\_ cm  
 C<sub>6</sub> \_\_\_\_\_ cm
Damage Offset D ± \_\_\_\_\_ cm

IF THIS COMMON IMPACT WAS WITH A MOTOR VEHICLE NOT IN TRANSPORT, FILL IN THE INFORMATION BELOW.

Model Year: \_\_\_\_\_

Make: \_\_\_\_\_

Model: \_\_\_\_\_

VIN: \_\_\_\_\_

The Weight, CDC, Scene Data and Damage Information for this vehicle should be recorded above.

Complete and ATTACH the appropriate vehicle damage sketch and dimensions to the Form.

## SUMMARY OF CRASHPC RESULTS USING DAMAGE

5019505

SPEED CHANGE  
(DAMAGE)

## VEHICLE #1

TOTAL 22 KPH ( 13 MPH)  
 LONGITUDINAL -22 KPH ( -13 MPH)  
 LATITUDINAL 0 KPH ( 0 MPH)  
 PDOF ANGLE 0 DEGREES  
 ENERGY DISSIPATED = 33069 JOULES ( 24387 FT-LB)

## VEHICLE #2

TOTAL 0 KPH ( 0 MPH)  
 LONGITUDINAL 0 KPH ( 0 MPH)  
 LATITUDINAL 0 KPH ( 0 MPH)  
 PDOF ANGLE 0 DEGREES  
 ENERGY DISSIPATED = 0 JOULES ( 0 FT-LB)

## DAMAGE DATA

	VEHICLE #1	VEHICLE #2
SIZE CATEGORY	3	11
STIFFNESS CATEGORY	9	0
VEHICLE WEIGHT	1621 KGS ( 3574 LBS)	***** KGS (2204586 LBS) *
CDC	12FYEW1	BARRIER
PDOP ANGLE	0 DEGREES *	0 DEGREES *
CRUSH LENGTH	158 CM. ( 62 IN.)	0 CM. ( 0 IN.) *
C1	22 CM. ( 9 IN.)	0 CM. ( 0 IN.) *
C2	18 CM. ( 7 IN.)	0 CM. ( 0 IN.) *
C3	16 CM. ( 6 IN.)	0 CM. ( 0 IN.) *
C4	14 CM. ( 6 IN.)	0 CM. ( 0 IN.) *
C5	11 CM. ( 4 IN.)	0 CM. ( 0 IN.) *
C6	8 CM. ( 3 IN.)	0 CM. ( 0 IN.) *
D	-42 CM. ( -17 IN.)	0 CM. ( 0 IN.) *
E	-53 CM. ( -21 IN.)	0 CM. ( 0 IN.) *

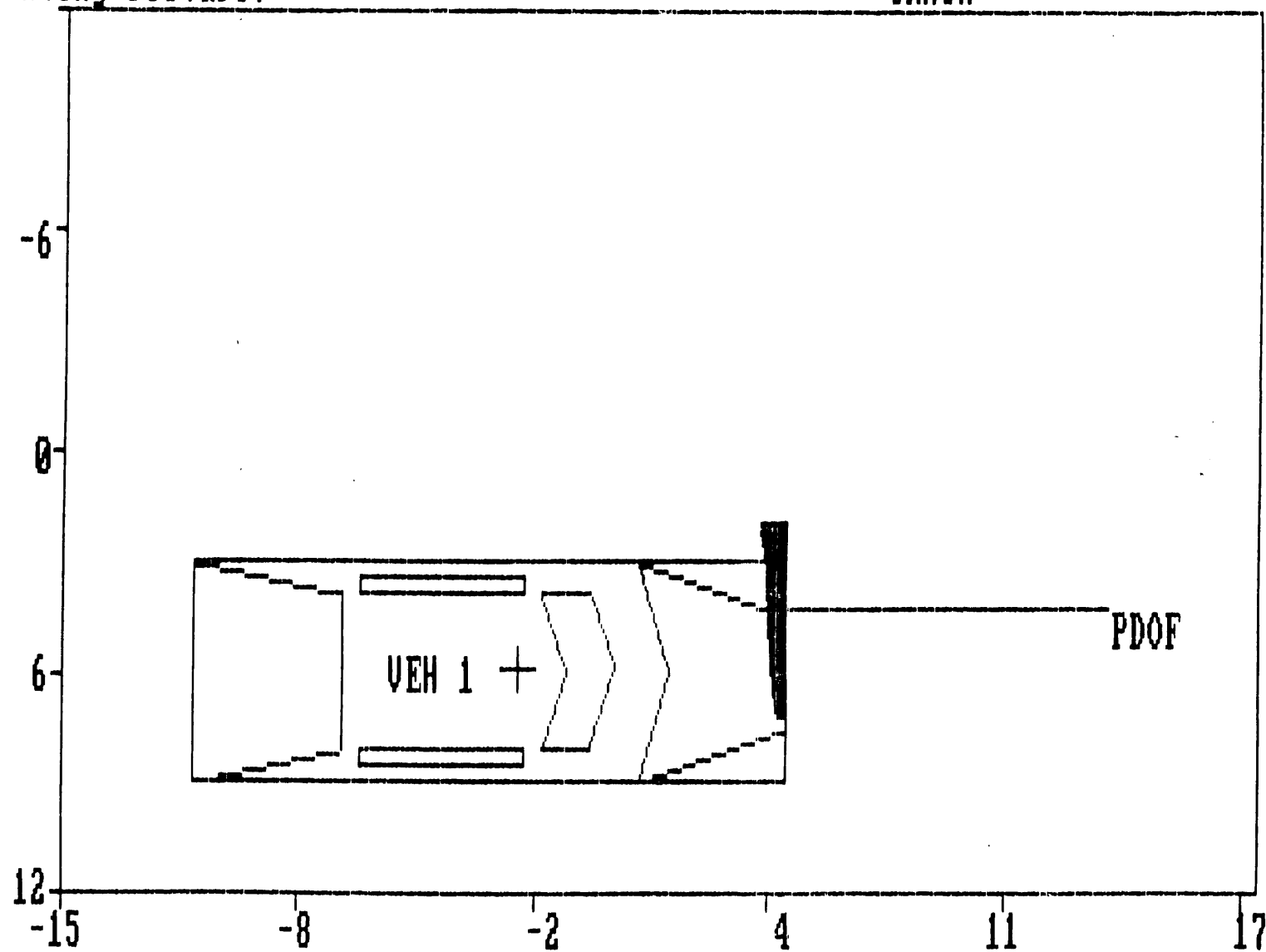
(\* INDICATES DEFAULT VALUE)

## DIMENSIONS AND INERTIAL PROPERTIES

	VEHICLE #1	VEHICLE #2
CG TO FRONT AXLE	130 CM. ( 51 IN.)	127 CM. ( 50 IN.)
CG TO REAR AXLE	141 CM. ( 56 IN.)	127 CM. ( 50 IN.)
CG	150 CM. ( 59 IN.)	127 CM. ( 50 IN.)
CG TO FRONT OF VEH	228 CM. ( 90 IN.)	127 CM. ( 50 IN.)
CG TO REAR OF VEH	-270 CM. ( -106 IN.)	-127 CM. ( -50 IN.)
CG TO SIDE OF VEH	92 CM. ( 36 IN.)	127 CM. ( 50 IN.)
MOMENT OF INERTIA	14010 KGS ( 30886 LBS)	***** KGS (***** LBS)
VEHICLE MASS	4 KGS ( 9 LBS)	2600 KGS ( 5732 LBS)

Printing Picture:

CRASH



25-B

**Lic. User: NHTSA #8**

S/N: \_\_\_\_\_  
Date: \_\_\_\_\_ 1995

S/N: [REDACTED]

**Version: 4.61**

Date: [REDACTED] 1995  
SCI95-05

NO MESSAGES

IMPACT SPEED km/h		SPEED CHANGE km/h			BASIS FOR RESULTS
FWD	LAT	TOTAL	LONG.	LATERAL	
N/A	N/A	N/A	N/A	N/A	SPINOUT TRAJECTORIES AND CONSERVATION OF LINEAR MOMENTUM
N/A	N/A	N/A	N/A	N/A	SPINOUT TRAJECTORIES AND DAMAGE
		23.1	-23.1	0.0	DAMAGE DATA ONLY

IMPACT SPEED km/h		SPEED CHANGE km/h			BASIS FOR RESULTS
FWD	LAT	TOTAL	LONG.	LATERAL	
N/A	N/A	N/A	N/A	N/A	SPINOUT TRAJECTORIES AND CONSERVATION OF LINEAR MOMENTUM
N/A	N/A	N/A	N/A	N/A	SPINOUT TRAJECTORIES AND DAMAGE
		24.7	24.7	-0.0	DAMAGE DATA ONLY

SUMMARY OF DAMAGE DATA  
(NOTE: '\*\*' indicates default value)

	Vehicle #1		Vehicle #2	
CLASS / STIFFNESS CATEGORIES	3 / 6		3 / 6	
WEIGHT	1621.0 kg		1516.0 kg	
CDC	12FYEW1		06BZEW3	
DAMAGE WIDTH	158.0 cm		121.7 cm	**
CRUSH DEPTH 1	22.0 cm		0.0 cm	**
CRUSH DEPTH 2	18.0 cm		28.4 cm	**
CRUSH DEPTH 3	16.0 cm		28.4 cm	**
CRUSH DEPTH 4	14.0 cm		56.8 cm	**
CRUSH DEPTH 5	11.0 cm			
CRUSH DEPTH 6	8.0 cm			
DAMAGE MIDPOINT OFFSET	-42.0 cm		40.0 cm	
DAMAGE ENERGY	28049.6 Joules		50293.0 Joules	
MAGNITUDE OF PRINCIPAL FORCE	149616.0 N		230151.4 N	
DIRECTION OF PRINCIPAL FORCE	-0.0 deg	**	180.0 deg	**
MOMENT ARM OF PRINCIPAL FORCE	-53.4 cm		-55.8 cm	
DAMAGE CENTROID	-53.4 cm		55.8 cm	

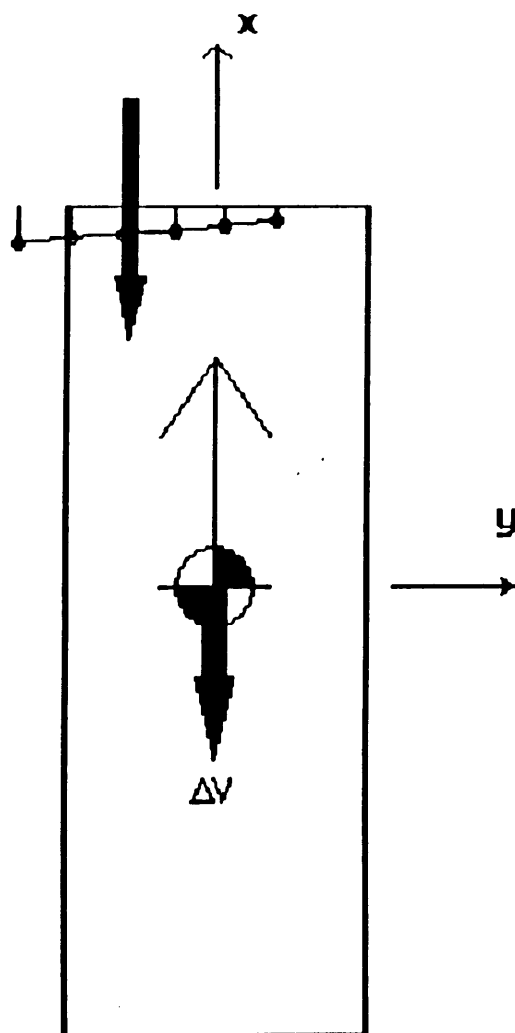
DIMENSIONAL, INERTIAL AND CRUSH STIFFNESS PROPERTIES  
(NOTE: '\*\*' indicates default value)

	Vehicle #1		Vehicle #2	
CG TO FRONT AXLE	130.3 cm	**	130.3 cm	**
CG TO REAR AXLE	141.0 cm	**	141.0 cm	**
TRACKWIDTH	149.6 cm	**	149.6 cm	**
YAW MOMENT OF INERTIA	3473.6 kg-m <sup>2</sup>	**	3248.6 kg-m <sup>2</sup>	**
MASS	1618.3 kg		1513.5 kg	
BODY LENGTH FROM CG TO FRONT	228.1 cm	**	228.1 cm	**
BODY LENGTH FROM CG TO REAR	-270.3 cm	**	-270.3 cm	**
BODY OVERALL WIDTH	184.4 cm	**	184.4 cm	**
CRUSH STIFFNESSES:				
	A	B	A	B
	lb/in	lb/in <sup>2</sup>	lb/in	lb/in <sup>2</sup>
	325.2 **	37.0 **	296.8 **	70.1 **

26-B

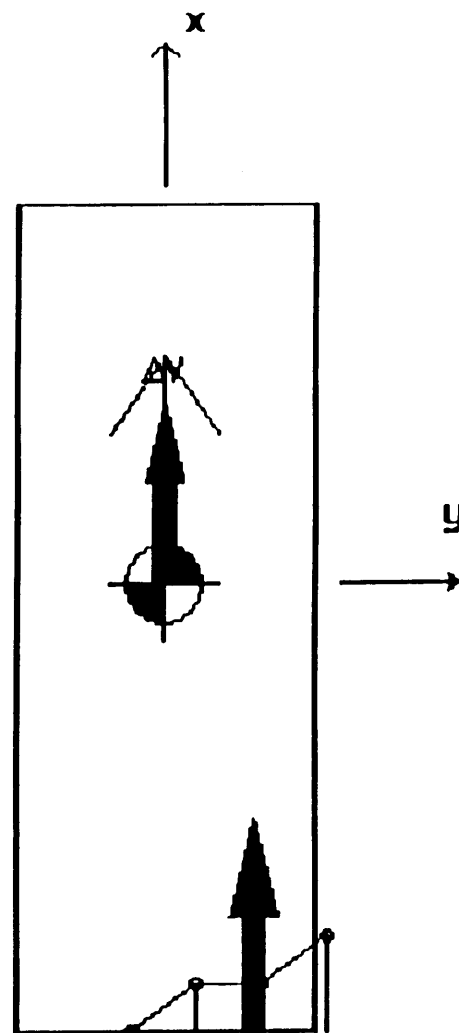
27

Vehicle No. 1



CDC/PDOF: 12FYEW1 -0.0 deg  
Max Impact Force: 149616 N

Vehicle No. 2

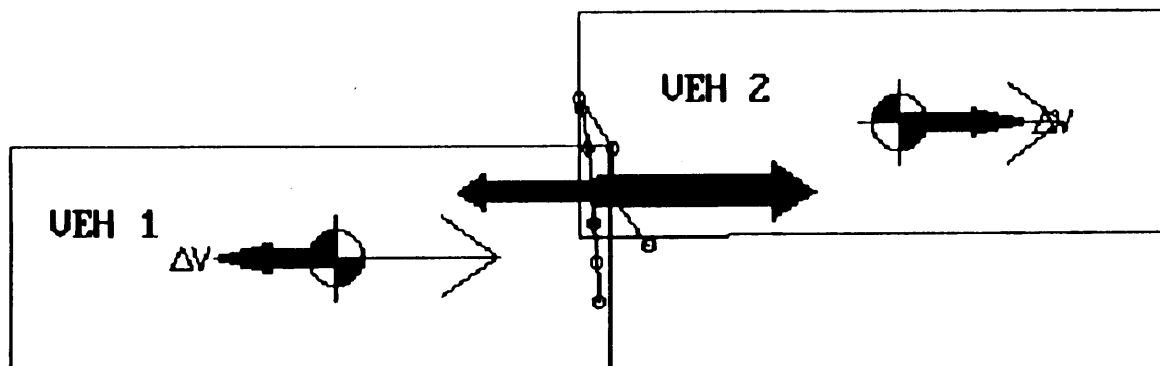


CDC/PDOF: 06BZEW3 180.0 deg  
Max Impact Force: 230151 N



### EDCRASH Damage Profiles

	Veh #1	Veh #2
Delta-U (km/h):		
X	-23.1	24.7
Y	0.0	-0.0
Tot	23.1	24.7
Crush Data (cm):		
W	158.0	121.7
D	-42.0	40.0
C1	22.0	0.0
C2	18.0	28.4
C3	16.0	28.4
C4	14.0	56.8
C5	11.0	
C6	8.0	



**EDCRASH**  
**At Impact**

	Ueh #1	Ueh #2
Delta-U (km/h)		
(BASIS: Damage)		
X	-23.1	24.7
Y	0.0	-0.0
Tot	23.1	24.7
PDOF	-0.0	180.0

**UNITS: km/h,m,deg**

**(NO SCENE DATA)**

**Appendix C:**

**NASS CDS ACCIDENT FORM**





## ACCIDENT FORM

1. Primary Sampling Unit Number 10

2. Case Number - Stratum 9505

### IDENTIFICATION

3. Number of General Vehicle  
Forms Submitted 03

4. Date of Accident  
(Month, Day, Year) 198

5. Time of Accident 1601

Code reported military time of accident.

NOTE: Midnight = 2400  
Unknown = 9999

### SPECIAL STUDIES - INDICATORS

Check (✓) each special study (SS15-SS18 below) that has been completed; code 1 for the checked special studies and 0 for the special studies not checked.

6. 0 SS15 Administrative Use 0

7. 0 SS16 Pedestrian Crash Data Study 0  
(Data for this special study available  
in a separate file.)

8. 0 SS17 Impact Fires 0

9. 0 SS18 Unsafe Driver Actions 0

10. 0 SS19 0

### NUMBER OF EVENTS

11. Number of Recorded Events  
in This Accident 02

Code the number of events which occurred  
in this accident.

### ACCIDENT EVENTS

For each event that occurred in the accident, code the lowest numbered vehicle in the left columns and the other involved vehicle or object in the right columns.

Accident Event Sequence Number	Vehicle Number	Class Of Vehicle	General Area of Damage	Vehicle Number or Object Contacted	Class Of Vehicle	General Area of Damage
12. <u>01</u>	13. <u>01</u>	14. <u>03</u>	15. <u>F</u>	16. <u>02</u>	17. <u>03</u>	18. <u>B</u>
19. <u>02</u>	20. <u>01</u>	21. <u>03</u>	22. <u>F</u>	23. <u>03</u>	24. <u>20</u>	25. <u>F</u>
26. <u>03</u>	27. <u>   </u>	28. <u>   </u>	29. <u>   </u>	30. <u>   </u>	31. <u>   </u>	32. <u>   </u>
33. <u>04</u>	34. <u>   </u>	35. <u>   </u>	36. <u>   </u>	37. <u>   </u>	38. <u>   </u>	39. <u>   </u>
40. <u>05</u>	41. <u>   </u>	42. <u>   </u>	43. <u>   </u>	44. <u>   </u>	45. <u>   </u>	46. <u>   </u>

IF GREATER THAN FIVE EVENTS, CONTINUE CODING ON THE ACCIDENT EVENT SUPPLEMENT

## CODES FOR CLASS OF VEHICLE

- |  |  |
|--|--|
| (00) Not a motor vehicle<br>(01) Subcompact/mini (wheelbase < 254 cm)<br>(02) Compact (wheelbase ≥ 254 but < 265 cm)<br>(03) Intermediate (wheelbase ≥ 265 but < 278 cm)<br>(04) Full size (wheelbase ≥ 278 but < 291 cm)<br>(05) Largest (wheelbase ≥ 291 cm)<br>(09) Unknown passenger car size<br>(14) Compact utility vehicle<br>(15) Large utility vehicle (≤ 4,500 kgs GVWR)<br>(16) Utility station wagon (≤ 4,500 kgs GVWR)<br>(19) Unknown utility type<br>(20) Minivan (≤ 4,500 kgs GVWR)<br>(21) Large van (≤ 4,500 kgs GVWR)<br>(24) Van Based school bus (≤ 4,500 kgs GVWR)<br>(28) Other van type (≤ 4,500 kgs GVWR)<br>(29) Unknown van type (≤ 4,500 kgs GVWR)<br>(30) Compact pickup truck (≤ 4,500 kgs GVWR) | (31) Large pickup truck (≤ 4,500 kgs GVWR)<br>(38) Other pickup truck (≤ 4,500 kgs GVWR)<br>(39) Unknown pickup truck type (≤ 4,500 kgs GVWR)<br>(45) Other light truck (≤ 4,500 kgs GVWR)<br>(48) Unknown light truck type (≤ 4,500 kgs GVWR)<br>(49) Unknown light vehicle type<br>(50) School bus (excludes van based) (> 4,500 kgs GVWR)<br>(58) Other bus (> 4,500 kgs GVWR)<br>(59) Unknown bus type<br>(60) Truck (> 4,500 kgs GVWR)<br>(67) Tractor without trailer<br>(68) Tractor-trailer(s)<br>(78) Unknown medium/heavy truck type<br>(79) Unknown light/medium/heavy truck type<br>(80) Motored cycle<br>(90) Other vehicle<br>(99) Unknown |
|--|--|

## CODES FOR GENERAL AREA OF DAMAGE (GAD)

- |   |  |   |   |
|---|--|---|---|
| CDS APPLICABLE<br>AND OTHER<br>VEHICLES | (O) Not a motor vehicle<br>(N) Noncollision<br>(F) Front | (R) Right side<br>(L) Left side<br>(B) Back | (T) Top<br>(U) Undercarriage<br>(9) Unknown |
|---|--|---|---|
- 
- |                               |  |  |   |
|-------------------------------|--|--|---|
| TDC<br>APPLICABLE<br>VEHICLES | (O) Not a motor vehicle<br>(N) Noncollision<br>(F) Front<br>(R) Right side | (L) Left side<br>(B) Back of unit with cargo area<br>(rear of trailer or straight truck)<br>(D) Back (rear of tractor) | (C) Rear of cab<br>(V) Front of cargo area<br>(T) Top<br>(U) Undercarriage<br>(9) Unknown |
|-------------------------------|--|--|---|

## CODES FOR VEHICLE NUMBER OR OBJECT CONTACTED

- |  |  |
|--|--|
| (01-30) — Vehicle Number<br><br><b>Noncollision</b><br>(31) Overturn — rollover (excludes end-over-end)<br>(32) Rollover — end-over-end<br>(33) Fire or explosion<br>(34) Jackknife<br>(35) Other intraunit damage (specify):<br>_____<br>(36) Noncollision injury<br>(38) Other noncollision (specify):<br>_____<br>(39) Noncollision — details unknown<br><br><b>Collision With Fixed Object</b><br>(41) Tree (≤ 10 cm in diameter)<br>(42) Tree (> 10 cm in diameter)<br>(43) Shrubbery or bush<br>(44) Embankment<br>(45) Breakaway pole or post (any diameter)<br><br><b>Nonbreakaway Pole or Post</b><br>(50) Pole or post (≤ 10 cm in diameter)<br>(51) Pole or post (> 10 cm but ≤ 30 cm in diameter)<br>(52) Pole or post (> 30 cm in diameter)<br>(53) Pole or post (diameter unknown)<br><br>(54) Concrete traffic barrier<br>(55) Impact attenuator<br>(56) Other traffic barrier (includes guardrail)<br>(specify): _____ | (57) Fence<br>(58) Wall<br>(59) Building<br>(60) Ditch or culvert<br>(61) Ground<br>(62) Fire hydrant<br>(63) Curb<br>(64) Bridge<br>(68) Other fixed object (specify):<br>_____<br>(69) Unknown fixed object<br><br><b>Collision with Nonfixed Object</b><br>(70) Passenger car, light truck, van, or other vehicle<br>not in-transport<br>(71) Medium/heavy truck or bus not in-transport<br>(72) Pedestrian<br>(73) Cyclist or cycle<br>(74) Other nonmotorist or conveyance<br><br>(75) Vehicle occupant<br>(76) Animal<br>(77) Train<br>(78) Trailer, disconnected in transport<br>(79) Object fell from vehicle in-transport<br>(88) Other nonfixed object (specify):<br>_____<br>(89) Unknown nonfixed object<br>(98) Other event (specify):<br>_____<br>(99) Unknown event or object |
|--|--|

**Appendix D:**

**NASS CDS VEHICLE FORMS: CASE VEHICLE**



## GENERAL VEHICLE FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

### VEHICLE IDENTIFICATION

4. Vehicle Model Year  
Code the last two digits of the model year  
(99) Unknown

5. Vehicle Make (specify):  
CADILLAC  
Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(99) Unknown

6. Vehicle Model (specify):  
EL Dorado  
Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(999) Unknown

7. Body Type  
Note: Applicable codes may be found on  
the back of this page.

8. Vehicle Identification Number

1G6EL13354U  
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17  
Left justify; Slash zeros and letter Z (0 and Z)  
No VIN—Code all zeros Unknown—Code all nines

9. Vehicle Special Use (This Trip)  
(0) No special use  
(1) Taxi  
(2) Vehicle used as school bus  
(3) Vehicle used as other bus  
(4) Military  
(5) Police  
(6) Ambulance  
(7) Fire truck or car  
(8) Other (specify):  
(9) Unknown

### OFFICIAL RECORDS

10. Police Reported Vehicle Disposition  
(0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown

11. Police Reported Travel Speed  
Code to the nearest kmph (NOTE: 000 means  
less than 0.5 kmph)  
(160) 159.5 kmph and above  
(999) Unknown

\_\_\_\_ mph X 1.6093 = \_\_\_\_ kmph

12. Speed Limit  
(000) No statutory limit  
Code posted or statutory speed limit  
in kmph  
(999) Unknown

35 mph X 1.6093 = \_\_\_\_ kmph

13. Police Reported Alcohol Presence For Driver  
(0) No alcohol present  
(1) Yes alcohol present  
(7) Not reported  
(8) No driver present  
(9) Unknown

14. Alcohol Test Result For Driver  
Code actual value (decimal implied  
before first digit—0.xx)  
(95) Test refused  
(96) None given  
(97) AC test performed, results unknown  
(98) No driver present  
(99) Unknown

Source: Autopsy

15. Police Reported Other Drug Presence For  
Driver  
(0) No other drug(s) present  
(1) Yes other drug(s) present  
(7) Not reported  
(8) No driver present  
(9) Unknown

16. Other Drug Specimen Test Result For Driver  
(0) No specimen test given  
(1) Drug(s) not found in specimen  
(2) Drug(s) found in specimen, (specify):  
Caffeine  
(3) Specimen test given, results unknown or not  
obtained  
(8) No driver present  
(9) Unknown if specimen test given

17. Driver's Zip Code  
(00001) Driver not a resident of U.S. or territories  
Code actual 5-digit zip code  
(99998) No driver present  
(99999) Unknown

18. Driver's Race/Ethnic Origin  
(1) White (non-Hispanic)  
(2) Black (non-Hispanic)  
(3) White (Hispanic)  
(4) Black (Hispanic)  
(5) American Indian, Eskimo or Aleut  
(6) Asian or Pacific Islander  
(7) Other (specify):  
(8) No driver present  
(9) Unknown

## CODES FOR BODY TYPE

### CDS APPLICABLE VEHICLES

#### *Automobiles*

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify): \_\_\_\_\_
- (09) Unknown automobile type

#### *Automobile Derivatives*

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine - more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

#### *Utility Vehicles (≤ 4,500 kgs GVWR)*

- (14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Passport, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Hummer, Landcruiser, Rover, Scout, Yukon)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

#### *Van Based Light Trucks (≤ 4,500 kgs GVWR)*

- (20) Minivan (Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Vista, Aerostar, Windstar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Expo Wagon, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van (≤ 4,500 kgs GVWR)
- (23) Van based motorhome (≤ 4,500 kgs GVWR)
- (24) Van based school bus (≤ 4,500 kgs GVWR)
- (25) Van based other bus (≤ 4,500 kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify): \_\_\_\_\_
- (29) Unknown van type

#### *Light Conventional Trucks (Pickup style cab, ≤ 4,500 kgs GVWR)*

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500, T100)

- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

#### *Other Light Trucks (≤ 4,500 kgs GVWR)*

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

### OTHER VEHICLES

#### *Buses (Excludes Van Based)*

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify): \_\_\_\_\_
- (59) Unknown bus type

#### *Medium/Heavy Trucks (> 4,500 kgs GVWR)*

- (60) Step van (> 4,500 kgs GVWR)
- (61) Single unit straight truck (4,500 kgs < GVWR ≤ 8,850 kgs)
- (62) Single unit straight truck (8,850 kgs < GVWR ≤ 12,000 kgs)
- (63) Single unit straight truck (> 12,000 kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

#### *Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)*

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify): \_\_\_\_\_
- (89) Unknown motored cycle type

#### *Other Vehicles*

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

## PRECRASH ENVIRONMENTAL DATA

19. Relation To Interchange Or Junction 2  
 (0) Non-interchange area and non-junction  
 (1) Interchange area related

*Non-Interchange junctions*

- (2) Intersection related  
 (3) Driveway, alley access related  
 (4) Other junction (specify) \_\_\_\_\_

(5) Unknown type of junction

(9) Unknown

20. Trafficway Flow 0  
 (0) Not physically divided (two way traffic)  
 (1) Divided trafficway-median strip without positive barrier  
 (2) Divided trafficway-median strip with positive barrier  
 (3) One way traffic  
 (9) Unknown

21. Number Of Travel Lanes 5

- (1) One  
 (2) Two  
 (3) Three  
 (4) Four  
 (5) Five  
 (6) Six  
 (7) Seven or more  
 (9) Unknown

22. Roadway Alignment 1

- (1) Straight  
 (2) Curve right  
 (3) Curve left  
 (9) Unknown

23. Roadway Profile 1

- (1) Level  
 (2) Uphill grade (> 2%)  
 (3) Hill crest  
 (4) Downhill grade (> 2%)  
 (5) Sag  
 (9) Unknown

24. Roadway Surface Type 2

- (1) Concrete  
 (2) Bituminous (asphalt)  
 (3) Brick or block  
 (4) Slag, gravel, or stone  
 (5) Dirt  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

25. Roadway Surface Condition 1

- (1) Dry  
 (2) Wet  
 (3) Snow or slush  
 (4) Ice  
 (5) Sand, dirt, or oil  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

26. Light Conditions 1

- (1) Daylight  
 (2) Dark  
 (3) Dark, but lighted  
 (4) Dawn  
 (5) Dusk  
 (9) Unknown

27. Atmospheric Conditions 0

- (0) No adverse atmospheric-related driving conditions  
 (1) Rain  
 (2) Sleet/hail  
 (3) Snow  
 (4) Fog  
 (5) Rain and fog  
 (6) Sleet and fog  
 (7) Other (e.g., smog, smoke, blowing sand or dust, etc.) (specify): \_\_\_\_\_  
 (9) Unknown

28. Traffic Control Device 1

- (0) No traffic control(s)  
 (1) Traffic control signal (not RR crossing)

*Regulatory*

- (2) Stop sign  
 (3) Yield sign  
 (4) School zone sign  
 (5) Other regulatory sign (specify): \_\_\_\_\_

- (6) Warning sign (not RR crossing)  
 (7) Unknown sign  
 (8) Miscellaneous/other controls including RR controls (specify): \_\_\_\_\_

(9) Unknown

29. Traffic Control Device Functioning 2

- (0) No traffic control device  
 (1) Traffic control device not functioning (specify): \_\_\_\_\_  
 (2) Traffic control device functioning properly  
 (9) Unknown

**PRECRASH DRIVER RELATED DATA****30. Driver's Distraction/Inattention To Driving** 99  
(Prior To Recognition Of Critical Event)

- (00) No driver present  
(01) Attentive or not distracted  
(02) Looked but did not see

*Distractions*

- (03) By other occupant(s), (specify): \_\_\_\_\_  
(04) By moving object in vehicle (specify): \_\_\_\_\_  
(05) While talking or listening to cellular phone (specify location and type of phone): \_\_\_\_\_  
(06) While dialing cellular phone (specify location and type of phone): \_\_\_\_\_  
(07) While adjusting climate controls  
(08) While adjusting radio, cassette, CD (specify): \_\_\_\_\_  
(09) While using other device/object in vehicle (specify): \_\_\_\_\_  
(10) Sleepy or fell asleep  
(11) Distracted by outside person, object, or event (specify): \_\_\_\_\_  
(12) Eating or drinking  
(13) Smoking related  
(97) Distracted/inattentive, details unknown  
(98) Other, distraction (specify): \_\_\_\_\_  
(99) Unknown

**31. Pre-Event Movement** 15  
(Prior to Recognition of Critical Event)

- (00) No driver present  
(01) Going straight  
(02) Decelerating in traffic lane  
(03) Accelerating in traffic lane  
(04) Starting in traffic lane  
(05) Stopped in traffic lane  
(06) Passing or overtaking another vehicle  
(07) Disabled or parked in travel lane  
(08) Leaving a parking position  
(09) Entering a parking position  
(10) Turning right  
(11) Turning left  
(12) Making a U-turn  
(13) Backing up (other than for parking position)  
(14) Negotiating a curve  
(15) Changing lanes  
(16) Merging  
(17) Successful avoidance maneuver to a previous critical event  
(97) Other (specify): \_\_\_\_\_  
(99) Unknown

**32. Critical Precrash Event** 50*This Vehicle Loss of Control Due To:*

- (01) Blow out or flat tire  
(02) Stalled engine  
(03) Disabling vehicle failure (e.g., wheel fell off) (specify): \_\_\_\_\_  
(04) Non-disabling vehicle problem (e.g., hood flew up) (specify): \_\_\_\_\_  
(05) Poor road conditions (puddle, pot hole, ice, etc.) (specify): \_\_\_\_\_  
(06) Traveling too fast for conditions  
(08) Other cause of control loss (specify): \_\_\_\_\_  
(09) Unknown cause of control loss

*This Vehicle Traveling*

- (10) Over the lane line on left side of travel lane  
(11) Over the lane line on right side of travel lane  
(12) Off the edge of the road on the left side  
(13) Off the edge of the road on the right side  
(14) End departure  
(15) Turning left at intersection  
(16) Turning right at intersection  
(17) Crossing over (passing through) intersection  
(18) This vehicle decelerating  
(19) Unknown travel direction

*Other Motor Vehicle In Lane*

- (50) Other vehicle stopped  
(51) Traveling in same direction with lower steady speed  
(52) Traveling in same direction while decelerating  
(53) Traveling in same direction with higher speed  
(54) Traveling in opposite direction  
(55) In crossover  
(56) Backing  
(59) Unknown travel direction of other motor vehicle in lane

*Other Motor Vehicle Encroaching Into Lane*

- (60) From adjacent lane (same direction)—over left lane line  
(61) From adjacent lane (same direction)—over right lane line  
(62) From opposite direction—over left lane line  
(63) From opposite direction—over right lane line  
(64) From parking lane  
(65) From crossing street, turning into same direction  
(66) From crossing street, across path  
(67) From crossing street, turning into opposite direction  
(68) From crossing street, intended path not known  
(70) From driveway, turning into same direction  
(71) From driveway, across path  
(72) From driveway, turning into opposite direction  
(73) From driveway, intended path not known  
(74) From entrance to limited access highway  
(78) Encroachment by other vehicle—details unknown

*Pedestrian, Pedalcyclist, or Other Nonmotorist*

- (80) Pedestrian in roadway  
(81) Pedestrian approaching roadway  
(82) Pedestrian—unknown location  
(83) Pedalcyclist or other nonmotorist in roadway (specify): \_\_\_\_\_  
(84) Pedalcyclist or other nonmotorist approaching roadway, (specify): \_\_\_\_\_  
(85) Pedalcyclist or other nonmotorist—unknown location (specify): \_\_\_\_\_

*Object or Animal*

- (87) Animal in roadway  
(88) Animal approaching roadway  
(89) Animal—unknown location  
(90) Object in roadway  
(91) Object approaching roadway  
(92) Object—unknown location  
(98) Other critical precrash event (specify): \_\_\_\_\_  
(99) Unknown

33. Attempted Avoidance Maneuver 01

- (00) No driver present
- (01) No avoidance maneuver
- (02) Braking (no lockup)
- (03) Braking (lockup)
- (04) Braking (lockup unknown)
- (05) Releasing brakes
- (06) Steering left
- (07) Steering right
- (08) Braking and steering left
- (09) Braking and steering right
- (10) Accelerating
- (11) Accelerating and steering left
- (12) Accelerating and steering right
- (98) Other action (specify):

(99) Unknown

34. Pre-Impact Stability 1

- (0) No driver present
- (1) Tracking
- (2) Skidding longitudinally—rotation less than 30 degrees
- (3) Skidding laterally—clockwise rotation
- (4) Skidding laterally—counterclockwise rotation
- (7) Other vehicle loss-of-control (specify):

(9) Pre-crash stability unknown

35. Pre-Impact Location 1

- (0) No driver present
- (1) Stayed in original travel lane
- (2) Stayed on roadway but left original travel lane
- (3) Stayed on roadway, not known if left original travel lane
- (4) Departed roadway
- (5) Remained off roadway
- (6) Returned to roadway
- (7) Entered roadway
- (9) Unknown

36. Accident Type 20

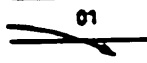


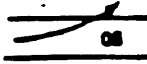
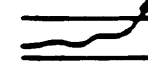

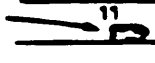


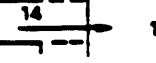

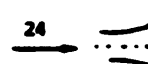

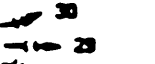
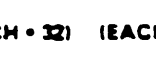

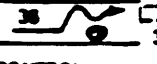


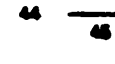




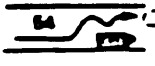









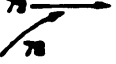
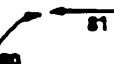






(Note: Applicable codes on back of this page)

- (00) No impact  
Code the number of the diagram that best describes the accident circumstance
- (98) Other accident type (specify):

(99) Unknown

**STOP HERE IF GV07 DOES NOT EQUAL 01 - 49**



Category	Configuration	ACCIDENT TYPES (Includes Intent)					
I Single Driver	A Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH., PED., ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN	
	B Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH., PED., ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN	
	C Forward Impact	 11 PARKED VEH.	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER	16 SPECIFICS UNKNOWN
II Same Trafficway Same Direction	D Rear-End	 20 STOPPED 21, 22, 23	 24 SLOWER 25, 26, 27	 28 DECEL. 29, 30, 31	 (EACH - 32) SPECIFICS OTHER	 (EACH - 33) SPECIFICS UNKNOWN	
	E Forward Impact	 34 CONTROL/ TRACTION LOSS	 36 CONTROL/ TRACTION LOSS	 38 AVOID COLLISION WITH VEH.	 40 AVOID COLLISION WITH OBJECT	(EACH - 42) SPECIFICS OTHER	(EACH - 43) SPECIFICS UNKNOWN
	F Sideswipe Angle	 44	 45	 46	 (EACH - 48) SPECIFICS OTHER	(EACH - 49) SPECIFICS UNKNOWN	
III Same Trafficway Opposite Direction	G Head-On	 50 LATERAL MOVE	(EACH - 62) SPECIFICS OTHER	(EACH - 63) SPECIFICS UNKNOWN			
	H Forward Impact	 54 CONTROL/ TRACTION LOSS	 56 CONTROL/ TRACTION LOSS	 58 AVOID COLLISION WITH VEH.	 60 AVOID COLLISION WITH OBJECT	(EACH - 62) SPECIFICS OTHER	(EACH - 63) SPECIFICS UNKNOWN
	I Sideswipe Angle	 64 LATERAL MOVE	(EACH - 65) SPECIFICS OTHER	(EACH - 67) SPECIFICS UNKNOWN			
IV Change Trafficway Vehicle Turning	J Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 71 INITIAL SAME DIRECTIONS	 73	 72	(EACH - 74) SPECIFICS OTHER	(EACH - 75) SPECIFICS UNKNOWN
	K Turn Into Path	 77 TURN INTO SAME DIRECTION	 79	 80 TURN INTO OPPOSITE DIRECTIONS	 81	 (EACH - 84) SPECIFICS OTHER	(EACH - 85) SPECIFICS UNKNOWN
V Intersecting Paths (Vehicle Damage)	L Straight Paths	 87	 88	(EACH - 90) SPECIFICS OTHER		(EACH - 91) SPECIFICS UNKNOWN	
VI Miscellaneous	M Backing Etc.	 92 BACKING VEH.	 93 OTHER VEH. OR OBJECT	94 Other Accident Type 95 Unknown Accident Type 96 No Impact			

**OCCUPANT RELATED**

37. Driver Presence in Vehicle 1  
 (0) Driver not present  
 (1) Driver present  
 (9) Unknown
38. Number of Occupants This Vehicle 01  
 (00-96) Code actual number of occupants for this vehicle  
 (97) 97 or more  
 (99) Unknown
39. Number of Occupant Forms Submitted 01

**AIR BAG RELATED**

40. Is this an AOPS Vehicle? 1  
 (0) No (includes unknown)  
 (1) Yes - researcher determined  
 (2) VIN determined air bag system  
 (3) VIN determined automatic (passive) belts  
 (4) VIN determined air bag and automatic (passive) belts
41. Air Bag(s) Deployment, First Seat Frontal 2  
 (0) Not equipped or not available  
 (1) No air bags deployed  
*Single Air Bag Vehicle*  
 (2) Driver air bag deployed  
 (3) Driver air bag, unknown if deployed  
*Multiple Air Bag Vehicle*  
 (4) Driver side only deployed  
 (5) Passenger side only deployed  
 (6) Driver and passenger side deployed  
 (7) Driver and passenger side unknown if deployed  
 (8) Air bag(s) deployed, details unknown  
 (9) Unknown
42. Air Bag(s) Deployment, Other Than First Seat Frontal 0  
 (0) Not equipped with an "other" air bag  
 (1) Deployed during accident (as a result of impact)  
 (2) Deployed inadvertently just prior to accident  
 (3) Deployed, details unknown  
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)  
 (5) Unknown if deployed  
 (7) Nondeployed  
 (9) Unknown

Specify type of "other" air bag present: \_\_\_\_\_

**VEHICLE WEIGHT ITEMS**

43. Vehicle Curb Weight 1550  
 \_\_\_\_\_ Code weight to nearest 10 kilograms.  
 (045) Less than 450 kilograms  
 (610) 6,100 kilograms or more  
 (999) Unknown  
3426 lbs X .4536 = 1554 kgs  
 Source: \_\_\_\_\_

44. Vehicle Cargo Weight 9990  
 \_\_\_\_\_ Code weight to nearest 10 kilograms.  
 (000) Less than 5 kilograms  
 (450) 4,500 kilograms or more  
 (999) Unknown  
 \_\_\_\_\_ lbs X .4536 = \_\_\_\_\_ kgs

Source: \_\_\_\_\_

**ROLLOVER DATA**

45. Rollover 00  
 (00) No rollover (no overturning)  
*Rollover (primarily about the longitudinal axis)*  
 (01-16) Code the number of quarter turns  
 (17) Rollover, 17 or more quarter turns (specify): \_\_\_\_\_  
 (98) Rollover--end-over-end (i.e., primarily about the lateral axis)  
 (99) Rollover (overturn), details unknown
46. Rollover Initiation Type 00  
 (00) No rollover  
 (01) Trip-over  
 (02) Flip-over  
 (03) Turn-over  
 (04) Climb-over  
 (05) Fall-over  
 (06) Bounce-over  
 (07) Collision with another vehicle  
 (08) Other rollover initiation type specify): \_\_\_\_\_  
 (98) Rollover--end-over-end  
 (99) Unknown rollover initiation type
47. Location of Rollover Initiation 0  
 (0) No rollover  
 (1) On roadway  
 (2) On shoulder--paved  
 (3) On shoulder--unpaved  
 (4) On roadside or divided trafficway median  
 (8) Rollover--end-over-end  
 (9) Unknown
48. Rollover Initiation Object Contacted 00  
 (Note: Applicable codes on back of page)
49. Location on Vehicle Where Initial Principal Tripping Force Is Applied 0  
 (0) No rollover  
 (1) Wheels/tires  
 (2) Side plane  
 (3) End plane  
 (4) Undercarriage  
 (5) Other location on vehicle (specify): \_\_\_\_\_  
 (6) Non-contact rollover forces (specify): \_\_\_\_\_  
 (8) Rollover--end-over-end  
 (9) Unknown
50. Direction of Initial Roll 0  
 (0) No rollover  
 (1) Roll right - primarily about the longitudinal axis  
 (2) Roll left - primarily about the longitudinal axis  
 (8) Rollover--end-over-end  
 (9) Unknown roll direction

**VERRIDE/UNDERRIDE (THIS VEHICLE)**51. Front Override/Underride (this Vehicle) 952. Rear Override/Underride (this Vehicle) 0

- (0) No override/underride, or not an end-to-end impact between two CDS applicable vehicles, and no medium/heavy truck or bus underride

**Override (see specific CDC)***(Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49))*

- (1) 1st CDC  
(2) 2nd CDC  
(3) Other not automated CDC (specify):  
\_\_\_\_\_

**Underride (see specific CDC)***(Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49))*

- (4) 1st CDC  
(5) 2nd CDC  
(6) Other not automated CDC (specify):  
\_\_\_\_\_

- (7) Medium/heavy truck or bus override (of any configuration)  
(9) Unknown

**HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V**

Values: (000)-(359) Code actual value

- (997) Noncollision  
(998) Impact with object  
(999) Unknown

53. Heading Angle For This Vehicle 3 2 154. Heading Angle For Other Vehicle 3 2 1**RECONSTRUCTION DATA**55. Towed Trailing Unit 0

- (0) No towed unit  
(1) Yes—towed trailing unit  
(9) Unknown

56. Documentation of Trajectory Data for This Vehicle 1

- (0) No  
(1) Yes

57. Post Collision Condition of Tree or Pole (For Highest Delta V) 0

- (0) Not collision (for highest delta V) with tree or pole  
(1) Not damaged  
(2) Cracked/sheared  
(3) Tilted < 45 degrees  
(4) Tilted ≥ 45 degrees  
(5) Uprooted tree  
(6) Separated pole from base  
(7) Pole replaced  
(8) Other (specify):  
\_\_\_\_\_  
(9) Unknown

**ACCIDENT RECONSTRUCTION PROGRAMS HIGHEST DELTA V**58. Basis for Total (Resultant) Delta V (highest) 03

- (00) No vehicle inspection

**Delta V Calculated**

- (01) Reconstruction program -damage only routine  
(02) Reconstruction program -damage and trajectory routine  
(03) Missing vehicle algorithm

**Delta V Not Calculated**

- (04) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.

*All vehicles within scope (CDC applicable) of reconstruction program but one of the collision conditions is beyond the scope of the reconstruction program or other acceptable reconstruction technique, regardless of adequacy of damage data.*

- (05) Rollover  
(06) Other non-horizontal forces  
(07) Sideswipe type damage  
(08) Severe override  
(09) Yielding object  
(10) Overlapping damage  
(11) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available, (specify):  
\_\_\_\_\_  
\_\_\_\_\_

- (98) Other, (specify):  
\_\_\_\_\_  
\_\_\_\_\_

## COMPUTER GENERATED CRASH SEVERITY

59. Total Delta V

0212116 Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)  
 (160) 159.5 kmph and above  
 (999) Unknown

60. Longitudinal Component of Delta V

Highest

+ 021-2116 Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: \_000 means greater than  
 -0.5 kmph and less than +0.5 kmph)  
 (±160) ±159.5 kmph and above  
 (\_999) Unknown

61. Lateral Component of Delta V

Highest

+ 00000 Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: \_000 means greater than -0.5 kmph  
 and less than +0.5 kmph)  
 (±160) ±159.5 kmph and above  
 (\_999) Unknown

62. Energy Absorption

032.90032934.7 Nearest 100 joules (highest)

\_\_\_\_\_ Nearest 100 joules (secondary)

(NOTE: 0000 means less than 50 joules)  
 (9997) 999,650 joules or more  
 (9999) Unknown

63. Impact Speed

Highest

998

\_\_\_\_\_ Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)  
 (160) 159.5 kmph and above  
 (998) Trajectory algorithm not run  
 (999) Unknown

## DELTA V CONFIDENCE LEVEL

64. Confidence In Reconstruction Program Results (For Highest Delta V)

(0) No reconstruction

(1) Collision fits model — results appear reasonable

(2) Collision fits model — results appear high

(3) Collision fits model — results appear low

(4) Borderline reconstruction — results appear reasonable

4

## OTHER SPEED ESTIMATE

65. Barrier Equivalent Speed

Highest

022

\_\_\_\_\_ Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)  
 (160) 159.5 kmph and above  
 (999) Unknown

IS MISSING VEHICLE ALGORITHM APPLICABLE FOR THIS VEHICLE? ☒ YES [ ] NOIF YES: IS A COMPLETED PROGRAM SUMMARY INCLUDED? ☒ YES [ ] NO

ESTIMATED DELTA V	VEHICLE INSPECTION
<p>66. Estimated Highest Delta V (Researcher Determined) <u>0</u></p> <p>(0) Reconstruction Delta V coded</p> <p><i>Estimated Delta V</i></p> <p>(1) Less than 10 kmph</p> <p>(2) <math>\geq 10</math> kmph but <math>&lt; 25</math> kmph</p> <p>(3) <math>\geq 25</math> kmph but <math>&lt; 40</math> kmph</p> <p>(4) <math>\geq 40</math> kmph but <math>&lt; 55</math> kmph</p> <p>(5) <math>\geq 55</math> kmph</p> <p><i>Other estimates of damage severity</i></p> <p>(6) Minor</p> <p>(7) Moderate</p> <p>(8) Severe</p> <p>(9) Unknown</p>	<p>67. Type of Vehicle Inspection <u>3</u></p> <p>(0) No inspection</p> <p>(1) Vehicle fully repaired-no damage evident</p> <p>(2) Partial inspection (specify): _____</p> <p>(3) Complete inspection</p>

\*\*\* IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV67=0), \*\*\*

DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS

\*\*\* IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE \*\*\*

THE EXTERIOR VEHICLE, INTERIOR VEHICLE,  
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.



## EXTERIOR VEHICLE FORM

1. Primary Sampling Unit Number <u>10</u>	3. Vehicle Number <u>01</u>
2. Case Number - Stratum <u>9505</u>	

### VEHICLE IDENTIFICATION

VIN <u>1G6EL13354U</u>	Model Year <u>90</u>
Vehicle Make (specify): <u>Cadillac</u>	Vehicle Model (specify): <u>ELdorado</u>

### LOCATOR

Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.

Specific Impact No.	Location of Direct Damage	Location of Field L	Location of Max Crush
01	Ⓐ BC OVER 74cm	Across front Bumper	C-1
02	Ⓑ BC OVER 62cm	" " "	

### CRUSH PROFILE IN CENTIMETERS

NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).

Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.

Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.

Use as many lines/columns as necessary to describe each damage profile.

Specific Impact Number	Plane of Impact C-Measurements	Direct Damage		Field L	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	±D
		Width (CDC)	Max Crush								
01	Front Bumper	74	41	148	41	32	25	22	23	31	-42
	FREE SPACE		16		16	11	7	7	11	16	
	FINAL		25		25	22	18	15	12	15	
	SL. Adjustment		-3		-3	-3	-2	-1	-1		
01	FINAL	74	22	148	22	18	16	14	11	15	-42
										-7	
	* OVERLAPPING damage to C <sub>6</sub> , MEAS. ADJUSTED										8
02	Front Bumper	62								7	+48

## ORIGINAL SPECIFICATIONS WORK SHEET

Wheelbase	<u>108.</u>	inches x 2.54 =	<u>274</u> cm
Overall Length	<u>191.4</u>	inches x 2.54 =	<u>486</u> cm
Maximum Width	<u>72.4</u>	inches x 2.54 =	<u>184</u> cm
Curb Weight	<u>3,426</u>	pounds x 0.4536 =	<u>1,554</u> kg
Average Track	<u>59.9</u>	inches x 2.54 =	<u>152</u> cm
Front Overhang	<u>44.5 - 44.1</u>	inches x 2.54 =	<u>105</u> cm
Rear Overhang	<u>47.8 - 38.7</u>	inches x 2.54 =	<u>101</u> cm
Undeformed End Width	_____	inches x 2.54 =	_____ cm
Engine Size: cyl/displ.	_____	cc x 0.001 =	_____ L
V8 SFI	_____	CID x 0.0164 =	<u>4.5</u> L

## SPECIAL CRASH INVESTIGATION ADDENDUM

Submodel Designation: {specify}	Color: {specify}	Repair Cost: \$
Transmission: {circle} <u>Automatic</u>   Manual	Speed: 3-speed   <u>4-speed</u>   5-speed   Other:	
Steering: {circle} <u>Power-assisted</u>   Manual	Type: rack-and-pinion   worm-and-gear   Other	
{please describe}:		
Brakes: {circle} <u>Power-assisted</u>   Manual	Type: 4-wheel disc   4-wheel drum   4-wheel hydraulic   front disc, rear drum   Other:	
Observed Defects: {specify}		
Fleet Type: {circle} <u>Private vehicle</u>   Rental vehicle   Leased vehicle   Commercial vehicle   Other		
{please describe}:		

## VEHICLE DAMAGE SKETCH

<b>TIRE - WHEEL DAMAGE</b> a. Rotation physically restricted RF <u>1</u> LF <u>1</u> RR <u>2</u> LR <u>2</u> (1) Yes (2) No (8) NA (9) Unk.		<b>ORIGINAL SPECIFICATIONS</b> Wheelbase <u>274</u> cm Overall Length <u>486</u> cm Maximum Width <u>184</u> cm Curb Weight <u>1554</u> kg Average Track <u>152</u> cm Front Overhang <u>111</u> cm Rear Overhang <u>101</u> cm Undeformed End Width <u>158</u> cm Engine Size: cyl./displ. <u>4.5</u> L		<b>WHEEL STEER ANGLES</b> (For locked front wheels or displaced rear axles only) RF $\pm$ _____ ° LF $\pm$ _____ ° RR $\pm$ _____ ° LR $\pm$ _____ ° Within $\pm$ 5 degrees
<b>TYPE OF TRANSMISSION</b> <input type="checkbox"/> Manual <input checked="" type="checkbox"/> Automatic		<b>DRIVE WHEELS</b> <input checked="" type="checkbox"/> FWD <input type="checkbox"/> RWD <input type="checkbox"/> 4WD		
		Approximate Cargo Weight _____ kg		

**MEASUREMENTS IN CENTIMETERS**

**Front View:** Bumper height 33, Bumper width 153. Event #1 on hood, Event #2 on bumper.

**Rear View:** Bumper width 153.

**Side View (Top):** POST-CRASH. Bumper corner 73, Stringline 114, Overall length 274, Bumper corner 99, Stringline 101. Total width 149.

**Side View (Bottom):** POST-CRASH. Bumper corner 99, Stringline 101, Overall length 273, Bumper corner 99, Stringline 110. Total width 110.

**NOTES** Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewalls, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.



## CDC WORKSHEET

## CODES FOR OBJECT CONTACTED

(01-30) — Vehicle Number

## Noncollision

- (31) Overturn — rollover (excludes end-over-end)  
 (32) Rollover—end-over-end  
 (33) Fire or explosion  
 (34) Jackknife  
 (35) Other intraunit damage (specify):

(36) Noncollision injury

(38) Other noncollision (specify):

(39) Noncollision — details unknown

## Collision With Fixed Object

- (41) Tree ( $\leq 10$  cm in diameter)  
 (42) Tree ( $> 10$  cm in diameter)  
 (43) Shrubbery or bush  
 (44) Embankment

(45) Breakaway pole or post (any diameter)

## Nonbreakaway Pole or Post

- (50) Pole or post ( $\leq 10$  cm in diameter)  
 (51) Pole or post ( $> 10$  cm but  $\leq 30$  cm in diameter)  
 (52) Pole or post ( $> 30$  cm in diameter)  
 (53) Pole or post (diameter unknown)

(54) Concrete traffic barrier

(55) Impact attenuator

(56) Other traffic barrier (includes guardrail) (specify):

(57) Fence

(58) Wall

(59) Building

(60) Ditch or culvert

(61) Ground

(62) Fire hydrant

(63) Curb

(64) Bridge

(68) Other fixed object (specify):

(69) Unknown fixed object

## Collision with Nonfixed Object

- (70) Passenger car, light truck, van, or other vehicle not in-transport  
 (71) Medium/heavy truck or bus not in-transport  
 (72) Pedestrian  
 (73) Cyclist or cycle  
 (74) Other nonmotorist or conveyance

(75) Vehicle occupant

(76) Animal

(77) Train

(78) Trailer, disconnected in transport

(79) Object fell from vehicle in-transport

(88) Other nonfixed object (specify):

(89) Unknown nonfixed object

(98) Other event (specify):

(99) Unknown event or object

## DEFORMATION CLASSIFICATION BY EVENT NUMBER

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force (degrees)	Incremental Value of Shift	(3) Deformation Location	(4) Specific Longitudinal or Lateral Location	(5) Specific Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
01	02	000		F	Y	E	W	01
02	03	+10		F	Z	L	W	01

## COLLISION DEFORMATION CLASSIFICATION

## HIGHEST DELTA "V"

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. <u>01</u>	5. <u>02</u>	6. <u>12</u>	7. <u>F</u>	8. <u>Y</u>	9. <u>E</u>	10. <u>W</u>	11. <u>01</u>

## Second Highest Delta "V"

12. <u>02</u>	13. <u>03</u>	14. <u>12</u>	15. <u>F</u>	16. <u>Z</u>	17. <u>L</u>	18. <u>W</u>	19. <u>01</u>
---------------	---------------	---------------	--------------	--------------	--------------	--------------	---------------

## CRUSH PROFILE IN CENTIMETERS

The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. (ALL MEASUREMENTS ARE IN CENTIMETERS.)

## HIGHEST DELTA "V"

20. L	21. C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	22. ±D
<u>158</u>	<u>022</u>	<u>018</u>	<u>016</u>	<u>014</u>	<u>011</u>	<u>008</u>	<u>0042</u>

## Second Highest Delta "V"

23. L	24. C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	25. ±D
---	---	---	---	---	---	---	---

26. Undeformed End Width  
(Coded when highest severity impact is an end plane impact.)  
Code to the nearest centimeter  
(250) 250 centimeters or more  
(998) No highest severity end plane impact  
(999) Unknown

158

27. Direct Damage Width  
(For highest severity impact)  
Code to the nearest centimeter  
(250) 250 centimeters or more  
(999) Unknown

074

28. Original Wheelbase  
Code to the nearest centimeter  
(650) 650 centimeters or more  
(999) Unknown  
\_\_\_\_\_ inches X 2.54 = 274 centimeters

274

29. Original Average Track Width  
Code to the nearest centimeter  
(185) 185 centimeters or more  
(999) Unknown  
\_\_\_\_\_ inches X 2.54 = 152 centimeters

152

		FUEL SYSTEM	
30. Are CDCs Documented but Not Coded on The Automated File?	<u>0</u>	35. Location of Fuel Tank-1 Filler Cap	<u>2</u>
(0) No		36. Location of Fuel Tank-2 Filler Cap	<u>0</u>
(1) Yes		(0) No fuel tank	
		(1) On back plane	
		(2) Aft of center of the rear wheels (rear axle) on left side plane	
		(3) Aft of center of the rear wheels (rear axle) on right side plane	
31. Researcher's Assessment of Vehicle Disposition	<u>1</u>	(4) Forward of center of the rear wheels (rear axle) on left side plane	
(0) Not towed due to vehicle damage		(5) Forward of center of the rear wheels (rear axle) on right side plane	
(1) Towed due to vehicle damage		(6) Over the center of the rear wheels (rear axle) on left side plane	
(9) Unknown		(7) Over the center of the rear wheels (rear axle) on right side plane	
		(8) Other (specify): _____	
32. Is This A Multi-Stage Manufactured Vehicle And/Or A Certified Altered Vehicle?	<u>0</u>	(9) Unknown	
(0) No post manufacturer modifications			
(1) Yes - post manufacturer modifications (specify): _____		37. Type of Fuel Tank-1	<u>1</u>
_____		38. Type of Fuel Tank-2	<u>0</u>
(Include photograph of CERTIFICATION PLACARD in case report)		(0) No fuel tank (electrical vehicle)	
(9) Unknown if vehicle is modified		(1) Metallic	
		(2) Non-metallic	
		(9) Unknown	
<b>FIRE OCCURRENCE</b>		39. Location of Fuel Tank-1	<u>5</u>
33. Fire Occurrence	<u>0</u>	40. Location of Fuel Tank-2	<u>0</u>
(0) No fire		(0) No fuel tank	
Yes, fire occurred		(1) Aft of center of the rear wheels (rear axle) centered	
(1) Minor		(2) Aft of center of the rear wheels (rear axle) left side	
(2) Major		(3) Aft of center of the rear wheels (rear axle) right side	
(9) Unknown		(4) Forward of center of the rear wheels (rear axle) centered	
		(5) Forward of center of the rear wheels (rear axle) left side	
34. Origin of Fire	<u>0</u>	(6) Forward of center of the rear wheels (rear axle) right side	
(0) No fire		(7) Over center of the rear wheels (rear axle)	
(1) Vehicle exterior (front, side, back, top)		(8) Other (specify): _____	
(2) Exhaust system		(9) Unknown	
(3) Fuel tank (and other fuel retention system parts)			
(4) Engine compartment		41. Damage to Fuel Tank-1	<u>1</u>
(5) Cargo/trunk compartment		42. Damage to Fuel Tank-2	<u>0</u>
(6) Instrument panel		(0) No fuel tank	
(7) Passenger compartment area		(1) No damage to fuel tank	
(8) Other location (specify): _____		(2) Deformed, no seam failure	
(9) Unknown		(3) Deformed, with a seam failure	
		(4) Punctured	
		(5) Lacerated (ripped)	
		(6) Abraded (scraped)	
		(7) Filler neck separation from the fuel tank	
		(8) Other damage (specify): _____	
		(9) Unknown	

<p>43. Leakage Location of Fuel System-1 <span style="float: right;"><u>1</u></span></p> <p>44. Leakage Location of Fuel System-2 <span style="float: right;"><u>0</u></span></p> <p>(0) No fuel tank (1) No fuel leakage</p> <p><i>Primary Area Of Leakage</i></p> <p>(2) Tank (3) Filler neck (4) Cap (5) Lines/pump/filter (6) Vent/emission recovery (8) Other (specify): _____ (9) Unknown</p> <p>45. Fuel Type-1 <span style="float: right;"><u>01</u></span></p> <p>46. Fuel Type-2 <span style="float: right;"><u>00</u></span></p> <p><i>Single Fuel Type</i></p> <p>(00) No fuel tank (01) Gasoline (02) Diesel (03) CNG (Compressed Natural Gas) (04) LPG (Liquid Petroleum Gas) also known as Propane (05) LNG (Liquid Natural Gas) (06) Methanol (M100 or M85) (07) Ethanol (E100 or E85) (08) Other (Hydrogen or others) (specify): _____</p> <p>_____ _____</p> <p><i>Electric Powered or Electric/Solar Powered Vehicles</i></p> <p>(10) Lead Acid Battery (11) Nickel-Iron Battery (12) Nickel-Cadmium Battery (13) Sodium Metal Chloride Battery (14) Sodium Sulfur Battery (18) Other (Specify): _____</p> <p>(98) Other Hybrid (specify): _____</p> <p>(99) Unknown fuel type</p>	<p>47. Is This Vehicle Equipped With More Than Two Fuel Tanks? <span style="float: right;"><u>0</u></span></p> <p>(0) No (one or two tanks only)</p> <p><i>Yes - More Than Two Tanks</i></p> <p>(1) Yes -- <u>no damage</u> to any tank or filler cap and <u>no fuel system leakage</u> (2) Yes -- <u>no damage</u> to any tank or filler cap but <u>there is fuel system leakage</u> (specify leakage location): _____ _____ (3) Yes -- <u>damage</u> to an additional tank or filler cap and <u>there is fuel system leakage</u> (specify the following): Type of tank _____ Tank location _____ Filler cap location _____ Tank damage _____ Location of leakage _____ Type of fuel _____ (9) Unknown if more than two tanks</p>
<p><b>COMMENTS</b></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	
<p>*** STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT TOWED ***</p> <p>(GV10=0)</p> <p>DO NOT COMPLETE THE INTERIOR VEHICLE FORM.</p>	



## INTERIOR VEHICLE FORM

1. Primary Sampling Unit Number 10

2. Case Number - Stratum 9505

3. Vehicle Number 01

### INTEGRITY

4. Passenger Compartment Integrity 00

(00) No integrity loss

Yes, Integrity Was Lost Through

(01) Windshield

(02) Door (side)

(03) Door/hatch (back door)

(04) Roof

(05) Roof glass

(06) Side window

(07) Rear window (backlight)

(08) Roof and roof glass

(09) Windshield and door (side)

(10) Windshield and roof

(11) Side and rear window (side window and backlight)

(12) Windshield and side window

(13) Door and side window

(98) Other combination of above (specify):

(99) Unknown

Door, Tailgate or Hatch Opening

5. LF 1 6. RF 1 7. LR 0 8. RR 0 9. TG/H 0

(0) No door/gate/hatch

(1) Door/gate/hatch remained closed and operational

(2) Door/gate/hatch came open during collision

(3) Door/gate/hatch jammed shut

(8) Other (specify):

(9) Unknown

Damage/Failure Associated with Door, Tailgate or Hatch Opening in Collision. If IV05-IV09  $\neq$  2, Then code 0

10. LF 0 11. RF 0 12. LR 0 13. RR 0 14. TG/H 0

(0) No door/gate/hatch or door not opened

Door, Tailgate or Hatch Came Open During Collision

(1) Door operational (no damage)

(2) Latch/striker failure due to damage

(3) Hinge failure due to damage

(4) Door structure failure due to damage

(5) Door support (i.e., pillar, sill, roof side rail, etc.) failure due to damage

(6) Latch/striker and hinge failure due to damage

(8) Other failure (specify):

(9) Unknown

### GLAZING

Type of Window/Windshield Glazing

15. WS 1 16. LF 4 17. RF 4 18. LR 4 19. RR 4  
20. BL 4 21. Roof 0 22. Other 0

(0) No glazing

(1) AS-1 - Laminated

(2) AS-2 - Tempered

(3) AS-3 - Tempered-tinted (original)

(4) AS-2 - Tempered-with after market tint

(5) AS-3 - Tempered-tinted (with additional after market tint)

(6) AS-14 - Glass/Plastic

(7) Glazing removed prior to accident

(8) Other (specify):

(9) Unknown

Window Precrash Glazing Status

23. WS 1 24. LF 2 25. RF 2 26. LR 1 27. RR 1  
28. BL 1 29. Roof 0 30. Other 0

(0) No glazing

(1) Fixed

(2) Closed

(3) Partially opened

(4) Fully opened

(7) Glazing removed prior to accident

(9) Unknown

Glazing Damage from Impact Forces

31. WS 1 32. LF 1 33. RF 1 34. LR 1 35. RR 1  
36. BL 1 37. Roof 0 38. Other 0

(0) No glazing

(1) No glazing damage from impact forces

(2) Glazing in place and cracked from impact forces

(3) Glazing in place and holed from impact forces

(4) Glazing out-of-place (cracked or not) and not holed from impact forces

(5) Glazing out-of-place and holed from impact forces

(6) Glazing disintegrated from impact forces

(7) Glazing removed prior to accident

(9) Unknown if damaged

Glazing Damage from Occupant Contact

39. WS 3 40. LF 1 41. RF 1 42. LR 1 43. RR 1  
44. BL 1 45. Roof 0 46. Other 0

(0) No glazing

(1) No occupant contact to glazing

(2) Glazing contacted by occupant but no glazing damage

(3) Glazing in place and cracked by occupant contact

(4) Glazing in place and holed by occupant contact

(5) Glazing out-of-place (cracked or not) by occupant contact and not holed by occupant contact

(6) Glazing out-of-place by occupant contact and holed by occupant contact

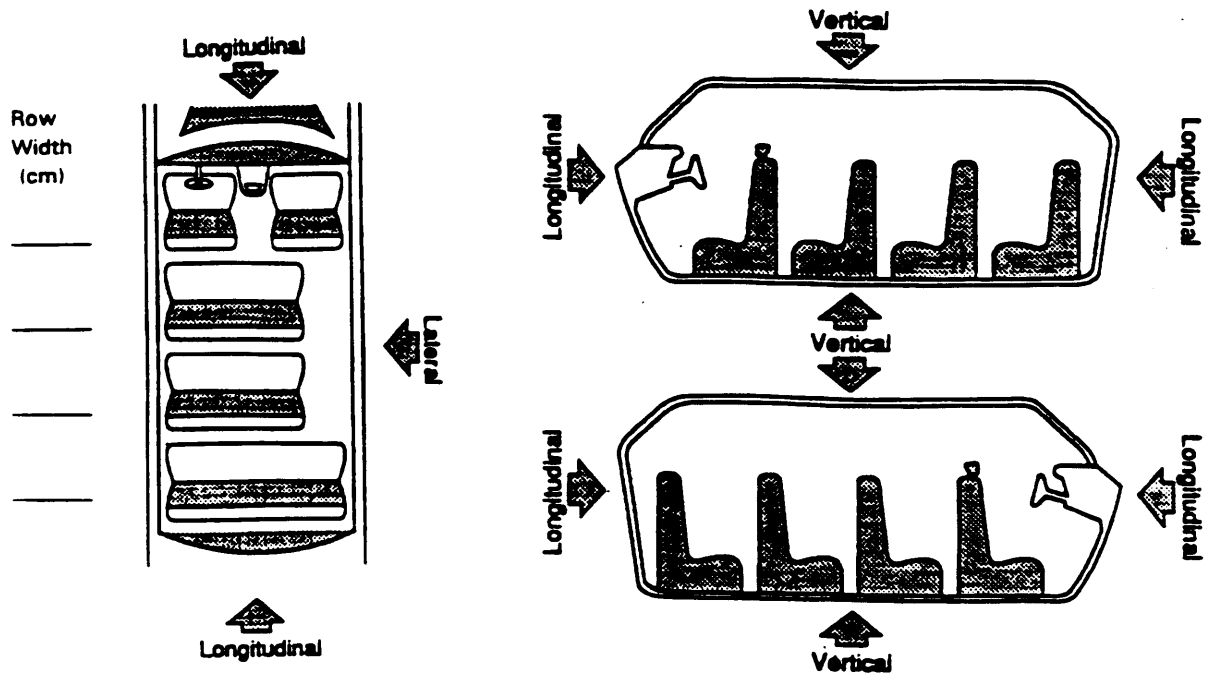
(7) Glazing removed prior to accident

(8) Glazing disintegrated by occupant contact

(9) Unknown if contacted by occupant

# INTRUSION WORKSHEET

Note: Sketch intruded areas



LOCATION OF INTRUSION	INTRUDED COMPONENT	(All Measurements Are in Centimeters)			DOMINANT CRUSH DIRECTION
		COMPARISON VALUE	INTRUDED VALUE	INTRUSION	
	NO	INTRUSIONS	-	VISIBLE	=
			-	=	
			-	=	
			-	=	
			-	=	
			-	=	
			-	=	
			-	=	
			-	=	
			-	=	
			-	=	
			-	=	
			-	=	
			-	=	
			-	=	

Document no more than the 15 most severe intrusions

## OCCUPANT AREA INTRUSION

Note: If no intrusions, leave variables IV47-IV86 blank.

	Location of Intrusion	Intruding Component	Magnitude of Intrusion	Dominant Crush Direction
1st	47. _____	48. _____	49. _____	50. _____
2nd	51. _____	52. _____	53. _____	54. _____
3rd	55. _____	56. _____	57. _____	58. _____
4th	59. _____	60. _____	61. _____	62. _____
5th	63. _____	64. _____	65. _____	66. _____
6th	67. _____	68. _____	69. _____	70. _____
7th	71. _____	72. _____	73. _____	74. _____
8th	75. _____	76. _____	77. _____	78. _____
9th	79. _____	80. _____	81. _____	82. _____
10th	83. _____	84. _____	85. _____	86. _____

## LOCATION OF INTRUSION

## Front Seat

- (11) Left  
(12) Middle  
(13) Right

## Second Seat

- (21) Left  
(22) Middle  
(23) Right

## Third Seat

- (31) Left  
(32) Middle  
(33) Right

## Fourth Seat

- (41) Left  
(42) Middle  
(43) Right

- (97) Catastrophic  
(98) Other enclosed area (specify) \_\_\_\_\_

- (99) Unknown

## INTRUDING COMPONENT

## Interior Components

- (01) Steering assembly  
(02) Instrument panel left  
(03) Instrument panel center  
(04) Instrument panel right  
(05) Toe pan  
(06) A (A1/A2)-pillar  
(07) B-pillar  
(08) C-pillar  
(09) D-pillar  
(10) Side panel - forward of the A1/A2-pillar  
(11) Door panel (side)  
(12) Side panel - rear of the B-pillar  
(13) Roof (or convertible top)  
(14) Roof side rail  
(15) Windshield  
(16) Windshield header  
(17) Window frame  
(18) Floor pan (includes sill)  
(19) Backlight header  
(20) Front seat back  
(21) Second seat back  
(22) Third seat back  
(23) Fourth seat back  
(24) Fifth seat back  
(25) Seat cushion  
(26) Back door/panel (e.g., tailgate)  
(27) Other interior component (specify): \_\_\_\_\_

## Exterior Components

- (30) Hood  
(31) Outside surface of this vehicle (specify): \_\_\_\_\_  
(32) Other exterior object in the environment (specify): \_\_\_\_\_  
(33) Unknown exterior object  
(97) Catastrophic  
(98) Intrusion of unlisted component(s) (specify): \_\_\_\_\_  
(99) Unknown

## MAGNITUDE OF INTRUSION

- (1)  $\geq 3$  centimeters but  $< 8$  centimeters  
(2)  $\geq 8$  centimeters but  $< 15$  centimeters  
(3)  $\geq 15$  centimeters but  $< 30$  centimeters  
(4)  $\geq 30$  centimeters but  $< 46$  centimeters  
(5)  $\geq 46$  centimeters but  $< 61$  centimeters  
(6)  $\geq 61$  centimeters  
(7) Catastrophic  
(9) Unknown

## DOMINANT CRUSH DIRECTION

- (1) Vertical  
(2) Longitudinal  
(3) Lateral  
(7) Catastrophic  
(9) Unknown

## STEERING RIM/SPOKE DEFORMATION

(All Measurements Are in Centimeters)

COMPARISON VALUE	—	DAMAGE VALUE	=	DEFORMATION
	—		=	
	—		=	
	—		=	
	—		=	

shear capsul completely sheared & seperated  
8cm

1041-D



## STEERING COLUMN

## INSTRUMENT PANEL

87. Steering Column Type 2

- (1) Fixed column  
 (2) Tilt column  
 (3) Telescoping column  
 (4) Tilt and telescoping column  
 (8) Other column type (specify): \_\_\_\_\_

(9) Unknown

88. Tilt Steering Column Adjustment 3

- (0) No tilt steering column  
 (1) Full up  
 (2) Between full up and center  
 (3) Center  
 (4) Between center and full down  
 (5) Full down  
 (9) Unknown

89. Telescoping Steering Column Adjustment 0

- (0) No telescoping steering column  
 (1) Full back  
 (2) Between full back and midpoint  
 (3) Midpoint  
 (4) Between midpoint and full forward  
 (5) Full forward  
 (9) Unknown

90. Steering Rim/Spoke Deformation 00

Code actual measured

deformation to the nearest centimeter

- (00) No steering rim deformation  
 (01-14) Actual measured value in centimeters  
 (15) 15 centimeters or more  
 (98) Observed deformation cannot be measured  
 (99) Unknown

91. Location of Steering Rim/Spoke Deformation 00

(00) No steering rim deformation

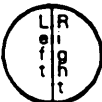
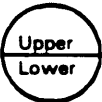
## Quarter Sections

- (01) Section A  
 (02) Section B  
 (03) Section C  
 (04) Section D



## Half Sections

- (05) Upper half of rim/spoke  
 (06) Lower half of rim/spoke  
 (07) Left half of rim/spoke  
 (08) Right half of rim/spoke



- (09) Complete steering wheel collapse  
 (10) Undetermined location  
 (99) Unknown

92. Odometer Reading 999,000

\_\_\_\_\_ kilometers

Code to the nearest 1,000 kilometers

- (000) No odometer  
 (001) Less than 1,500 kilometers  
 (500) 499,500 kilometers or more  
 (999) Unknown

\_\_\_\_\_ miles X 1.6093 = \_\_\_\_\_ kilometers

Source: Electronic

93. Instrument Panel Damage from Occupant Contact? 1

- (0) No  
 (1) Yes  
 (9) Unknown

94. Type of Knee Bolster Covering 1

- (0) No knee bolster  
 (1) Padded  
 (2) Rigid plastic  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

95. Knee Bolsters Deformed from Occupant Contact? 2

- (0) No knee bolster  
 (1) No deformation  
 (2) Yes - deformation  
 (9) Unknown

96. Did Glove Compartment Door Open During Collision(s)? 1

- (0) No glove compartment door  
 (1) No - door did not open  
 (2) Yes - door opened  
 (9) Unknown

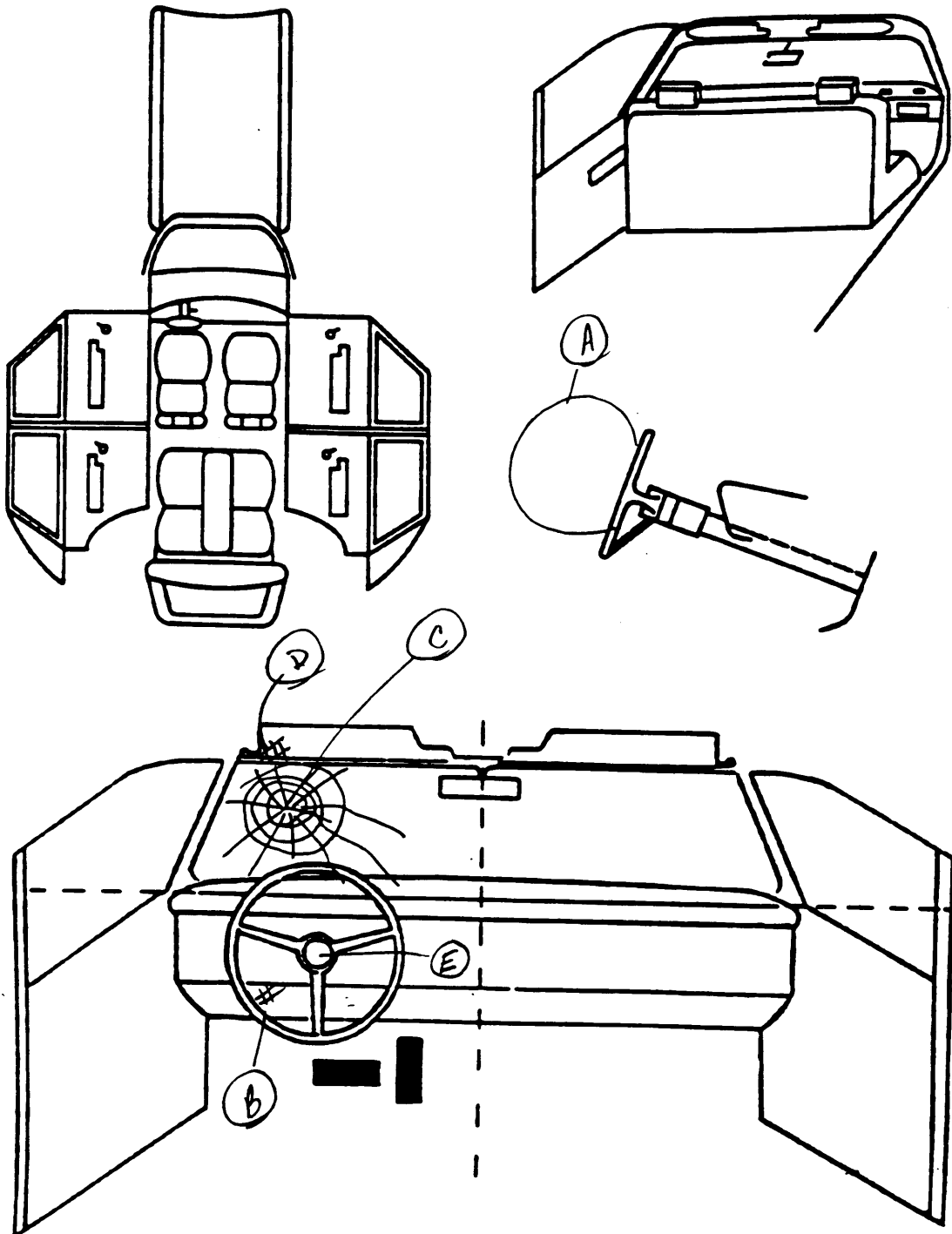
97. Adaptive (Assistive) Driving Equipment 0

- (0) No adaptive driving equipment  
 (1) Adaptive driving equipment installed (Check all that apply.)  
☐ Hand controls for braking/acceleration  
☐ Steering control devices (attached to OEM steering wheel)  
☐ Steering knob attached to steering wheel  
☐ Low effort power steering (unit or device)  
☐ Replacement steering wheel (i.e., reduced diameter)  
☐ Joy-stick steering controls  
☐ Wheelchair tie-downs  
☐ Modification to seat belts (specify): \_\_\_\_\_  
☐ Additional or relocated switches (specify): \_\_\_\_\_  
☐ Raised roof  
☐ Wall-mounted head rest (used behind wheelchair)  
☐ Other adaptive device (specify): \_\_\_\_\_

(9) Unknown

## VEHICLE INTERIOR SKETCHES

Note area of ejection/entrapment



Sketch windshield contact(s) and the damaged area(s) on the instrument panel outline (e.g., radio, glove compartment, damage to instrument panel structure.  
 Cross hatch contact points, draw spider webs or use other annotation as may be appropriate.  
 Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

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## POINTS OF OCCUPANT CONTACT

Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical Evidence	Confidence Level of Contact Point
A	170	1	neck/Face	Deployed	1
B	010	1	②Knee	Dented	1
C	001	1	HEAD	SPIDER Web	1
D	003	1	HEAD	HAIR STRANDS STUCK	1
E	175	1	neck	completely seperated	1
F				from Hub (Blown off-	
G				by bag)	
H					
I					
J					
K					
L					
M					
N					

## FRONT

- (001) Windshield  
 (002) Mirror  
 (003) Sunvisor  
 (004) Steering wheel rim  
 (005) Steering wheel hub/spoke  
 (006) Steering wheel (combination of codes 004 and 005)  
 (007) Steering column, transmission selector lever, other attachment  
 (008) Cellular telephone or CB radio  
 (009) Add on equipment (e.g., tape deck, air conditioner)  
 (010) Left instrument panel and below  
 (011) Center instrument panel and below  
 (012) Right instrument panel and below  
 (013) Glove compartment door  
 (014) Knee bolster  
 (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)  
 (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)  
 (017) Windshield reinforced by exterior object, (specify):  
 (019) Other front object (specify):

## CODES FOR INTERIOR COMPONENTS

## LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests  
 (052) Left side hardware or armrest  
 (053) Left A (A1/A2)-pillar  
 (054) Left B-pillar  
 (055) Other left pillar (specify):  
 (056) Left side window glass  
 (057) Left side window frame  
 (058) Left side window sill  
 (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.  
 (060) Other left side object (specify):

## RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests  
 (102) Right side hardware or armrest  
 (103) Right A (A1/A2)-pillar  
 (104) Right B-pillar  
 (105) Other right pillar (specify):  
 (106) Right side window glass  
 (107) Right side window frame  
 (108) Right side window sill  
 (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.  
 (110) Other right side object (specify):

## INTERIOR

- (151) Seat, back support  
 (152) Belt restraint webbing/buckle  
 (153) Belt restraint B-pillar or door frame attachment point  
 (154) Other restraint system component (specify):  
 (155) Head restraint system  
 (160) Other occupants (specify):  
 (161) Interior loose objects  
 (162) Child safety seat (specify):  
 (163) Other interior object (specify):

## AIR BAG

- (170) Air bag-driver side  
 (175) Air bag compartment cover-driver side  
 (180) Air bag-passenger side  
 (185) Air bag compartment cover-passenger side  
 (190) Other air bag (specify):  
 (195) Other air bag compartment cover (specify):

## ROOF

- (201) Front header  
 (202) Rear header  
 (203) Roof left side rail  
 (204) Roof right side rail  
 (205) Roof or convertible top

## FLOOR

- (251) Floor (including toe pan)  
 (252) Floor or console mounted transmission lever, including console  
 (253) Parking brake handle  
 (254) Foot controls including parking brake

## REAR

- (301) Backlight (rear window)  
 (302) Backlight storage rack, door, etc.  
 (303) Other rear object (specify):

## ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration  
 (402) Steering control devices (attached to OEM steering wheel)  
 (403) Steering knob attached to steering wheel  
 (405) Replacement steering wheel (i.e., reduced diameter)  
 (406) Joy stick steering controls  
 (407) Wheelchair tie-downs  
 (408) Modification to seat belts, (specify):  
 (409) Additional or relocated switches, (specify):  
 (410) Raised roof  
 (411) Wall mounted head rest (used behind wheel chair)  
 (412) Other adaptive device (specify):

## CONFIDENCE LEVEL OF CONTACT POINT

- (1) Certain  
 (2) Probable  
 (3) Possible  
 (9) Unknown

## MANUAL RESTRAINTS

**NOTES:** Encode the applicable data for each seat position in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

If a Child safety seat is present, encode the data on the back of this page.

If the vehicle has automatic restraints available, encode the appropriate data on the back of the previous page.

		Left	Center	Right
F I R S T	Availability	4		4
	Evidence of usage	04		04
	Used in this crash?	00		00
	Proper Use	0		0
	Failure Modes	0		0
	Anchorage Adjustment	1		1
S E C O N D	Availability	4	3	4
	Evidence of usage	04	00	04
	Used in this crash?	00	00	00
	Proper Use	0	0	0
	Failure Modes	0	0	0
	Anchorage Adjustment	1	0	1
O T H E R	Availability			
	Evidence of usage			
	Used in this crash?			
	Proper Use			
	Failure Modes			
	Anchorage Adjustment			

### Manual (Active) Belt System Availability

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available - type unknown

### Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)
- (8) Other belt (specify): \_\_\_\_\_
- (9) Unknown

### Manual (Active) Belt System Use

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperable (specify): \_\_\_\_\_

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used - type unknown
- (08) Other belt used (specify): \_\_\_\_\_

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat type unknown
- (18) Other belt used with child safety seat (specify): \_\_\_\_\_
- (99) Unknown if belt used

### Proper Use of Manual (Active) Belts

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

### Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): \_\_\_\_\_
- (8) Other improper use of manual belt system (specify): \_\_\_\_\_
- (9) Unknown

### Manual (Active) Belt Failure Modes During Accident

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): \_\_\_\_\_
- (6) Broken retractor
- (7) Combination of above (specify): \_\_\_\_\_
- (8) Other manual belt failure (specify): \_\_\_\_\_
- (9) Unknown

### Shoulder Belt Upper Anchorage Adjustment

- (0) No shoulder belt
- (1) No upper anchorage adjustment for shoulder belt

### Adjustable shoulder Belt Upper Anchorage

- (2) In full up position
- (3) In mid position
- (4) In full down position
- (5) Position unknown
- (9) Unknown if position has adjustable upper anchorage adjustment

**AUTOMATIC RESTRAINTS**

NOTES: Encode the data for each applicable front seat position. The attribute for the variables may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

**AIR BAGS**

		Left Front	Right Front	Other
F I R S T	Availability/Function	/	0	
	Deployment	/		
	Failure	/		

**Air Bag System Availability/Function**

(0) Not equipped/not available

(1) Air bag

*Non-functional*

(2) Air bag disconnected (specify): \_\_\_\_\_

(3) Air bag not reinstalled

(9) Unknown

**Are There Indications of Air Bag System Failure? (This Occupant Position)**

(0) Not equipped/not available

(1) No

(2) Yes (specify): \_\_\_\_\_

(9) Unknown

**Frontal Air Bag System Deployment (This Occupant Position)**

(0) Not equipped/not available

(1) Deployed during accident (as a result of impact)

(2) Deployed inadvertently just prior to accident

(3) Deployed, accident sequence undetermined

(4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)

(5) Unknown if deployed

(7) Nondeployed

(9) Unknown

**Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position)**

(0) Not equipped with an "other" air bag

(1) Deployed during accident (as a result of impact)

(2) Deployed inadvertently just prior to accident

(3) Deployed, details unknown

(4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)

(5) Unknown if deployed

(7) Nondeployed

(9) Unknown

**AUTOMATIC BELTS**

		Left	Right
F I R S T	Availability/Function	0	0
	Use	0	0
	Type	0	0
	Proper Use	0	0
	Failure Modes	0	0

**Automatic (Passive) Belt System Availability/Function**

(0) Not equipped/not available

(1) 2 point automatic belts

(2) 3 point automatic belts

(3) Automatic belts - type unknown

*Non-functional*

(4) Automatic belts destroyed or rendered inoperative

(9) Unknown

**Automatic (Passive) Belt System Use**

(0) Not equipped/not available/destroyed or rendered inoperative

(1) Automatic belt in use

(2) Automatic belt not in use (manually disconnected, motorized track inoperative)

(3) Automatic belt use unknown

(9) Unknown

**Automatic (Passive) Belt System Type**

(0) Not equipped/not available

(1) Non-motorized system

(2) Motorized system

(9) Unknown

**Proper Use of Automatic (Passive) Belt System**

(0) Not equipped/not available/not used

(1) Automatic belt used properly

(2) Automatic belt used properly with child safety seat

*Automatic Belt Used Improperly*

(3) Automatic shoulder belt worn under arm

(4) Automatic shoulder belt worn behind back

(5) Automatic belt worn around more than one person

(6) Lap portion of automatic belt worn on abdomen

(7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): \_\_\_\_\_

(8) Other improper use of automatic belt system (specify): \_\_\_\_\_

(9) Unknown

**Automatic (Passive) Belt Failure Modes During Accident**

(0) Not equipped/not available/not in use

(1) No automatic belt failure(s)

(2) Torn webbing (stretched webbing not included)

(3) Broken buckle or latchplate

(4) Upper anchorage separated

(5) Other anchorage separated (specify): \_\_\_\_\_

(6) Broken retractor

(7) Combination of above (specify): \_\_\_\_\_

(8) Other automatic belt failure (specify): \_\_\_\_\_

(9) Unknown

# FIRST SEAT FRONTAL AIR BAGS

NOTES: Encode the applicable data for the driver and first seat passenger in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

	Driver	Passenger
Type of air bag?	1	0
Flaps open at tear points?	1	0
Flaps damaged?	2	0
Air bag damaged?	01	0
Source of air bag damage	01	0
Air bag tethered?	1	0
Air bag have vent ports?	2	0
Other occupant contact air bag?	1	0
Occupant wearing eyewear?	4	0

## Type of Air Bag

- (0) Not equipped/not available
- (1) Original manufacturer installed system
- (2) Retrofitted air bag
- (3) Replacement air bag
- (8) Unknown type of air bag
- (9) Unknown

## Did Air Bag Module Cover Flap(s) Open At Designated Tear Points?

- (0) Not equipped/not available
- (1) No
- (2) Yes
- (3) Deployed, unknown if flap(s) opened at designated tear points
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

## Were Air Bag Module Cover Flap(s) Damaged?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify): *blown off Hub completely*
- (3) Deployed, unknown if air bag module cover flap(s) damaged
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

## Was There Damage To The Air Bag?

- (00) Not equipped/not available
- (01) Not damaged

## Yes - Air Bag Damage

- (02) Ruptured
- (03) Cut
- (04) Torn
- (05) Holed
- (06) Burned
- (07) Abraded
- (88) Other damage (specify):

## Source of Air Bag Damage

- (00) Not equipped/not available
- (01) Not damaged
- (02) Object worn by occupant, (specify):
- (03) Object carried by occupant, (specify):
- (04) Adaptive/assistive controls, (specify):
- (05) Fire in vehicle
- (06) Thermal burns
- (07) Rescue or emergency efforts
- (88) Other damage source (specify):
- (95) Damaged, unknown source
- (96) Deployed, unknown if damaged
- (97) Not deployed
- (98) Unknown if deployed
- (99) Unknown

## Was The Air Bag Tethered?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify number of tether straps):
- (3) Deployed, unknown if tethered
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

## Did The Air Bag Have Vent Ports?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify number of vent ports): *2*
- (3) Deployed, unknown if vent ports present
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

## Was the Air Bag in this Occupant's Position Contacted by Another Occupant?

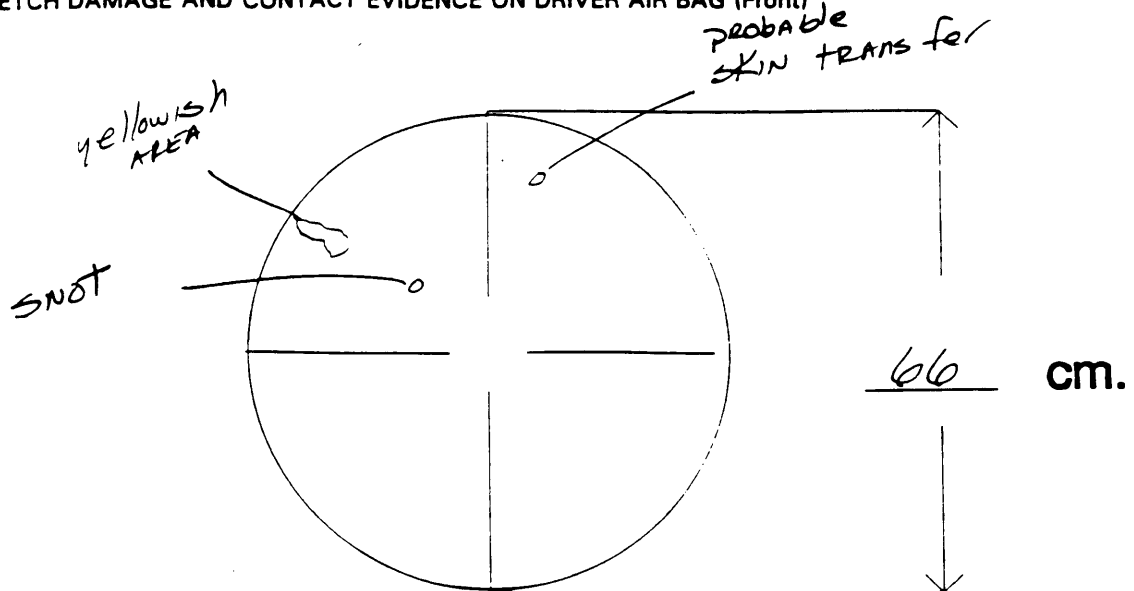
- (0) Not equipped/not available
- (1) No
- (2) Yes (specify):
- (3) Deployed, unknown if other occupant contact to air bag
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

## Was This Occupant Wearing Eye-wear?

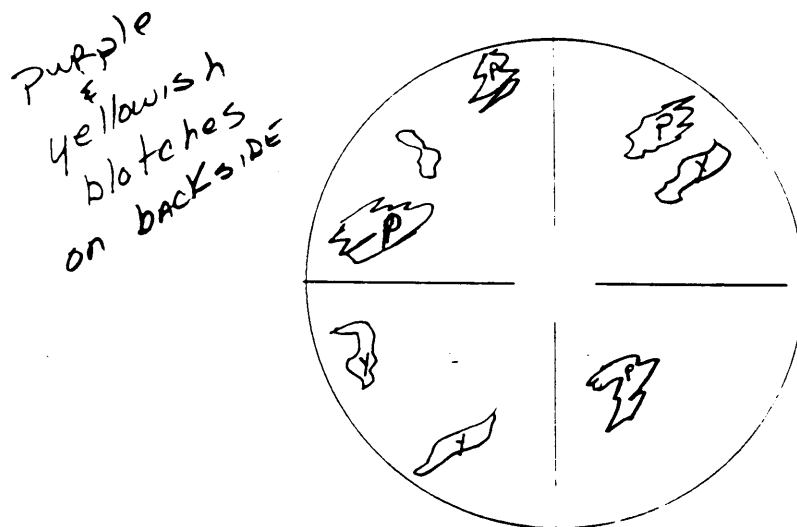
- (0) Not equipped/not available
- (1) No
- (2) Eyeglasses/sunglasses
- (3) Contact lenses
- (4) Deployed, unknown if eyewear worn
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

## DRIVER AIR BAG DAMAGE AND CONTACT SKETCHES

## 1. SKETCH DAMAGE AND CONTACT EVIDENCE ON DRIVER AIR BAG (Front)



## 2. SKETCH DAMAGE AND CONTACT EVIDENCE ON DRIVER AIR BAG (Back)

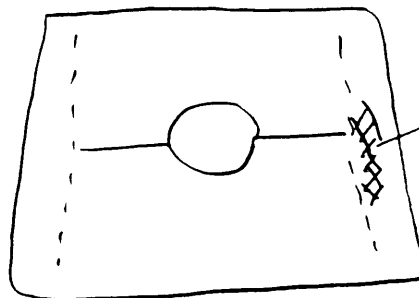
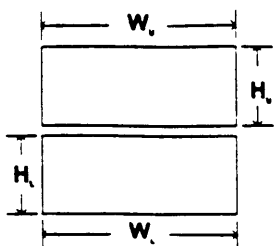


## DRIVER AIR BAG SKETCHES (Cont'd)

## 3. DRIVER AIR BAG MODULE COVER FLAP SIZE (DOUBLE)

a. Upper Flap

b. Lower Flap

width ( $W_U$ ) 9 cmwidth ( $W_L$ ) 9 cmheight ( $H_U$ ) 5 cmheight ( $H_L$ ) 4 1/2 cm

contact of  
some sort  
(possible bag)

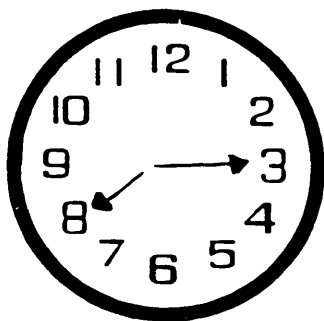
seal  
Broken

still together

## 4. SKETCH OF OTHER TYPE OF AIR BAG MODULE FLAP AND SIZE

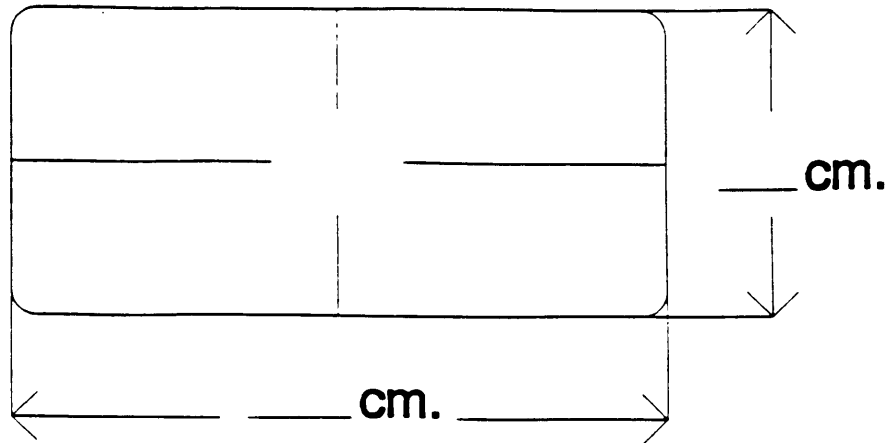
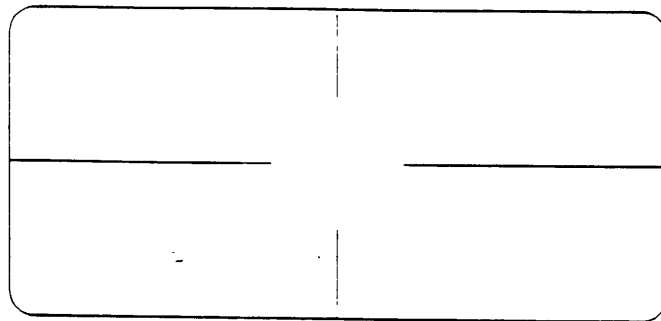
## 5. SKETCH OF OTHER TYPE OF AIR BAG VENT PORTS

## 6. SKETCH LOCATION OF CIRCULAR AIR BAG VENT PORTS



vents DIAM  
2 cm



**PASSENGER AIR BAG DAMAGE AND CONTACT SKETCHES****1. SKETCH DAMAGE AND CONTACT EVIDENCE ON PASSENGER AIR BAG (Front)****2. SKETCH DAMAGE AND CONTACT EVIDENCE ON PASSENGER AIR BAG (Back)**

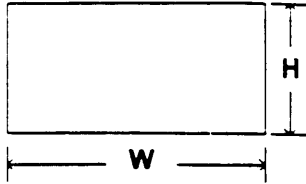
# PASSENGER AIR BAG SKETCHES (Cont'd)

## 3. PASSENGER AIR BAG MODULE COVER FLAP SIZE (SINGLE)

### a. Flap

width (W) \_\_\_\_\_

height (H) \_\_\_\_\_



## 4. PASSENGER AIR BAG MODULE COVER FLAP SIZE (DOUBLE)

### a. Upper Flap

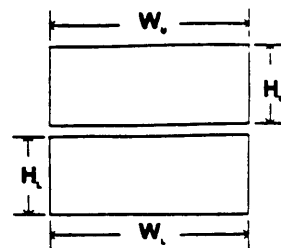
### b. Lower Flap

width ( $W_U$ ) \_\_\_\_\_

width ( $W_L$ ) \_\_\_\_\_

height ( $H_U$ ) \_\_\_\_\_

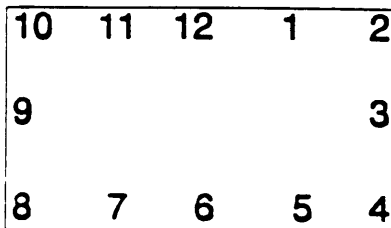
height ( $H_L$ ) \_\_\_\_\_



## 5. SKETCH OF OTHER TYPE OF AIR BAG MODULE FLAP AND SIZE

## 6. SKETCH OF OTHER TYPE OF AIR BAG VENT PORTS

## 7. SKETCH LOCATION OF RECTANGULAR AIR BAG VENT PORTS



**"OTHER" AIR BAG DAMAGE AND CONTACT SKETCHES**

1. SKETCH DAMAGE AND CONTACT EVIDENCE ON "OTHER" AIR BAG (Front)

2. SKETCH DAMAGE AND CONTACT EVIDENCE ON "OTHER" AIR BAG (Back)

**"OTHER" AIR BAG SKETCHES (Cont'd)**

**3. SKETCH AIR BAG MODULE FLAP AND SIZE OR OPENING FOR AIRBAG**

**4. SKETCH AIR BAG VENT PORTS**

## HEAD RESTRAINTS/SEAT EVALUATION

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
FIRST	Head Restraint Type/Damage	3		3
	Seat Type	02		02
	Seat Performance	1		1
	Seat Orientation	1		1
	Seat Track Position	3		4
	Seat Back Incline Pre/Post Impact	23		23
SECOND	Head Restraint Type/Damage	0	0	0
	Seat Type	04	04	04
	Seat Performance	1	1	1
	Seat Orientation	1	1	1
	Seat Track Position	1	1	1
	Seat Back Incline Pre/Post Impact	23	23	23
THIRD	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			
	Seat Track Position			
	Seat Back Incline Pre/Post Impact			
OTHER	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			
	Seat Track Position			
	Seat Back Incline Pre/Post Impact			

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE  
(I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

steering hub to seatback distance 61cm  
unknown if its been altered. for  
Removal of DRIVER by EMS personnel

## HEAD RESTRAINTS/SEAT EVALUATION

## Head Restraint Type/Damage by Occupant at This Occupant Position

- (0) No head restraints
- (1) Integral — no damage
- (2) Integral — damaged during accident
- (3) Adjustable — no damage
- (4) Adjustable — damaged during accident
- (5) Add-on — no damage
- (6) Add-on — damaged during accident
- (8) Other  
Specify: \_\_\_\_\_
- (9) Unknown

## Seat Type (this Occupant Position)

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify): \_\_\_\_\_
- (10) Box mounted seat (i.e., van type)
- (99) Unknown

## Seat Performance (this Occupant Position)

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed (specify): \_\_\_\_\_
- (4) Seat tracks/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): \_\_\_\_\_
- (7) Combination of above (specify): \_\_\_\_\_
- (8) Other (specify): \_\_\_\_\_
- (9) Unknown

## Seat Orientation (this Occupant Position)

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify): \_\_\_\_\_
- (9) Unknown

## Seat Track Adjusted Position Prior To Impact

- (0) Occupant not seated or no seat
- (1) Non-adjustable seat track

## Adjustable Seat Track

- (2) Seat at forward most track position
- (3) Seat between forward most and middle track positions
- (4) Seat at middle track position
- (5) Seat between middle and rear most track positions
- (6) Seat at rear most track position
- (9) Unknown

## Seat Back Incline Prior and Post Impact

- (00) Occupant not seated or no seat
- (01) Not adjustable

## Upright prior to impact

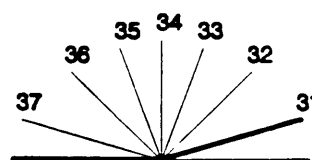
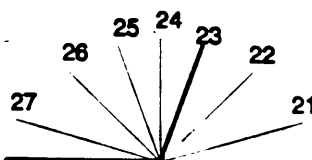
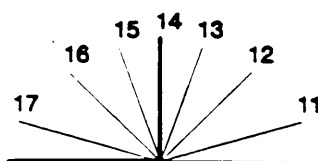
- (11) Moved to completely rearward position
- (12) Moved to rearward midrange position
- (13) Moved to slightly rearward position
- (14) Retained pre-impact position
- (15) Moved to slightly forward position
- (16) Moved to forward midrange position
- (17) Moved to completely forward position

## Slightly reclined prior to impact

- (21) Moved to completely rearward position
- (22) Moved to rearward midrange position
- (23) Retained pre-impact position
- (24) Moved to upright position
- (25) Moved to slightly forward position
- (26) Moved to forward midrange position
- (27) Moved to completely forward position

## Completely reclined prior to impact

- (31) Retained pre-impact position
- (32) Moved to rearward midrange position
- (33) Moved to slightly rearward position
- (34) Moved to upright position
- (35) Moved to slightly forward position
- (36) Moved to forward midrange position
- (37) Moved to completely forward position
- (99) Unknown



Coding diagrams for Seat Back Incline Position Prior and Post Impact

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE  
(I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

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## CHILD SAFETY SEAT FIELD ASSESSMENT

When a child safety seat is present enter the occupant's number in the first row and complete the column below the occupant's number using the codes listed below. Complete a column for each child safety seat present.

Occupant Number						
1. Type of Child Safety Seat	0					
2. Child Safety Seat Orientation	0					
3. Child Safety Seat Harness Usage	0					
4. Child Safety Seat Shield Usage	0					
5. Child Safety Seat Tether Usage	0					
6. Child Safety Seat Make/Model	0	Specify Below for Each Child Safety Seat				

1. Type of Child Safety Seat
- (0) No child safety seat
  - (1) Infant seat
  - (2) Toddler seat
  - (3) Convertible seat
  - (4) Booster seat
  - (7) Other type child safety seat (specify):

- (8) Unknown child safety seat type
- (9) Unknown if child safety seat used

2. Child Safety Seat Orientation
- (00) No child safety seat
  - Designed for Rear Facing for This Age/Weight
  - (01) Rear facing
  - (02) Forward facing
  - (08) Other orientation (specify):
  - (09) Unknown orientation

- Designed for Forward Facing for This Age/Weight
- (11) Rear facing
- (12) Forward facing
- (18) Other orientation (specify):
- (19) Unknown orientation

- Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight
- (21) Rear facing
- (22) Forward facing
- (28) Other orientation (specify):
- (29) Unknown orientation

- (99) Unknown if child safety seat used
3. Child Safety Seat Harness Usage

4. Child Safety Seat Shield Usage
5. Child Safety Seat Tether Usage
- Note: Options Below Are Used for Variables 3-5.
- (00) No child safety seat

- Not Designed with Harness/Shield/Tether
- (01) After market harness/shield/tether added, not used
- (02) After market harness/shield/tether used
- (03) Child safety seat used, but no after market harness/shield/tether added
- (09) Unknown if harness/shield/tether added or used

- Designed With Harness/Shield/Tether
- (11) Harness/shield/tether not used
- (12) Harness/shield/tether used
- (19) Unknown if harness/shield/tether used

- Unknown If Designed With Harness/Shield/Tether
- (21) Harness/shield/tether not used
- (22) Harness/shield/tether used
- (29) Unknown if harness/shield/tether used
- (99) Unknown if child safety seat used

6. Child Safety Seat Make/Model
- (Specify make/model and occupant number)

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**EJECTION/ENTRAPMENT DATA**

Complete the following if the researcher has any indication that an occupant was either ejected from or entrapped in the vehicle. Code the appropriate data on the Occupant Assessment Form.

**EJECTION** No [ ☒ ] Yes [ ☐ ]

Describe indications of ejection and body parts involved in partial ejection(s):

---



---



---



---

Occupant Number						
Ejection						
(Note on Vehicle Interior Sketch) Ejection Area						
Ejection Medium						
Medium Status						

**Ejection**

- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, Unknown degree
- (9) Unknown

**Ejection Area**

- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear

**(7) Roof**

- (8) Other area (e.g., back of pickup, etc.) (specify):

(9) Unknown

**Ejection Medium**

- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify):

**(5) Integral structure**

- (8) Other medium (specify):

(9) Unknown

**Medium Status (Immediately Prior to Impact)**

- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

**ENTRAPMENT** No [ ☒ ] Yes [ ☐ ]

Describe entrapment mechanism:

---



---



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---

Component(s):

(Note in vehicle interior diagram)

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**Appendix E:**

**NASS CDS GENERAL VEHICLE FORM: VEHICLE #2**



## GENERAL VEHICLE FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

### VEHICLE IDENTIFICATION

4. Vehicle Model Year  
Code the last two digits of the model year  
(99) Unknown

5. Vehicle Make (specify):

OLDSMOBILE  
Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(99) Unknown

6. Vehicle Model (specify):

Cutlass Ciera S.  
Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(999) Unknown

7. Body Type

Note: Applicable codes may be found on  
the back of this page.

8. Vehicle Identification Number

1G3AG55M2R6

Left justify; Slash zeros and letter Z (0 and Z)  
No VIN—Code all zeros Unknown—Code all nines

9. Vehicle Special Use (This Trip)

- (0) No special use  
(1) Taxi  
(2) Vehicle used as school bus  
(3) Vehicle used as other bus  
(4) Military  
(5) Police  
(6) Ambulance  
(7) Fire truck or car  
(8) Other (specify):  
(9) Unknown

### OFFICIAL RECORDS

10. Police Reported Vehicle Disposition

- (0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown

11. Police Reported Travel Speed

Code to the nearest kmph (NOTE: 000 means  
less than 0.5 kmph)  
(160) 159.5 kmph and above  
(999) Unknown

mph X 1.6093 = kmph

12. Speed Limit

(000) No statutory limit  
Code posted or statutory speed limit  
in kmph  
(999) Unknown

35 mph X 1.6093 = kmph

13. Police Reported Alcohol Presence For Driver

- (0) No alcohol present  
(1) Yes alcohol present  
(7) Not reported  
(8) No driver present  
(9) Unknown

14. Alcohol Test Result For Driver

Code actual value (decimal implied  
before first digit—0.xx)  
(95) Test refused  
(96) None given  
(97) AC test performed, results unknown  
(98) No driver present  
(99) Unknown

Source:

15. Police Reported Other Drug Presence For Driver

- (0) No other drug(s) present  
(1) Yes other drug(s) present  
(7) Not reported  
(8) No driver present  
(9) Unknown

16. Other Drug Specimen Test Result For Driver

- (0) No specimen test given  
(1) Drug(s) not found in specimen  
(2) Drug(s) found in specimen, (specify):  
(3) Specimen test given, results unknown or not  
obtained  
(8) No driver present  
(9) Unknown if specimen test given

17. Driver's Zip Code

(00001) Driver not a resident of U.S. or territories  
Code actual 5-digit zip code  
(99998) No driver present  
(99999) Unknown

18. Driver's Race/Ethnic Origin

- (1) White (non-Hispanic)  
(2) Black (non-Hispanic)  
(3) White (Hispanic)  
(4) Black (Hispanic)  
(5) American Indian, Eskimo or Aleut  
(6) Asian or Pacific Islander  
(7) Other (specify):  
(8) No driver present  
(9) Unknown

# CODES FOR BODY TYPE

BEST AVAILABLE COPY

## CDS APPLICABLE VEHICLES

### Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify):

(09) Unknown automobile type

### Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine - more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

### Utility Vehicles ( $\leq 4,500$ kgs GVWR)

- (14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Passport, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Hummer, Landcruiser, Rover, Scout, Yukon)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

### Van Based Light Trucks ( $\leq 4,500$ kgs GVWR)

- (20) Minivan (Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Vista, Aerostar, Windstar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Expo Wagon, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van ( $\leq 4,500$  kgs GVWR)
- (23) Van based motorhome ( $\leq 4,500$  kgs GVWR)
- (24) Van based school bus ( $\leq 4,500$  kgs GVWR)
- (25) Van based other bus ( $\leq 4,500$  kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify):
- (29) Unknown van type

### Light Conventional Trucks (Pickup style cab, $\leq 4,500$ kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup (foreign), Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500, T100)

- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

### Other Light Trucks ( $\leq 4,500$ kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

## OTHER VEHICLES

### Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify):
- (59) Unknown bus type

### Medium/Heavy Trucks ( $> 4,500$ kgs GVWR)

- (60) Step van ( $> 4,500$  kgs GVWR)
- (61) Single unit straight truck ( $4,500$  kgs  $<$  GVWR  $\leq 8,850$  kgs)
- (62) Single unit straight truck ( $8,850$  kgs  $<$  GVWR  $\leq 12,000$  kgs)
- (63) Single unit straight truck ( $> 12,000$  kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

### Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify):
- (89) Unknown motored cycle type

### Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

## PRECRASH ENVIRONMENTAL DATA

19. Relation To Interchange Or Junction 2  
 (0) Non-interchange area and non-junction  
 (1) Interchange area related

*Non-Interchange junctions*

- (2) Intersection related  
 (3) Driveway, alley access related  
 (4) Other junction (specify) \_\_\_\_\_

(5) Unknown type of junction

(9) Unknown

20. Trafficway Flow 0  
 (0) Not physically divided (two way traffic)  
 (1) Divided trafficway-median strip without positive barrier  
 (2) Divided trafficway-median strip with positive barrier  
 (3) One way traffic  
 (9) Unknown

21. Number Of Travel Lanes 5

- (1) One  
 (2) Two  
 (3) Three  
 (4) Four  
 (5) Five  
 (6) Six  
 (7) Seven or more  
 (9) Unknown

22. Roadway Alignment 1

- (1) Straight  
 (2) Curve right  
 (3) Curve left  
 (9) Unknown

23. Roadway Profile 1

- (1) Level  
 (2) Uphill grade (> 2%)  
 (3) Hill crest  
 (4) Downhill grade (> 2%)  
 (5) Sag  
 (9) Unknown

24. Roadway Surface Type 2

- (1) Concrete  
 (2) Bituminous (asphalt)  
 (3) Brick or block  
 (4) Slag, gravel, or stone  
 (5) Dirt  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

25. Roadway Surface Condition 1

- (1) Dry  
 (2) Wet  
 (3) Snow or slush  
 (4) Ice  
 (5) Sand, dirt, or oil  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

26. Light Conditions 1

- (1) Daylight  
 (2) Dark  
 (3) Dark, but lighted  
 (4) Dawn  
 (5) Dusk  
 (9) Unknown

27. Atmospheric Conditions 0

- (0) No adverse atmospheric-related driving conditions  
 (1) Rain  
 (2) Sleet/hail  
 (3) Snow  
 (4) Fog  
 (5) Rain and fog  
 (6) Sleet and fog  
 (7) Other (e.g., smog, smoke, blowing sand or dust, etc.) (specify): \_\_\_\_\_  
 (9) Unknown

28. Traffic Control Device 1

- (0) No traffic control(s)  
 (1) Traffic control signal (not RR crossing)

*Regulatory*

- (2) Stop sign  
 (3) Yield sign  
 (4) School zone sign  
 (5) Other regulatory sign (specify): \_\_\_\_\_

- (6) Warning sign (not RR crossing)  
 (7) Unknown sign  
 (8) Miscellaneous/other controls including RR controls (specify): \_\_\_\_\_

(9) Unknown

29. Traffic Control Device Functioning 2

- (0) No traffic control device  
 (1) Traffic control device not functioning (specify): \_\_\_\_\_  
 (2) Traffic control device functioning properly  
 (9) Unknown

**PRECRASH DRIVER RELATED DATA**

30. Driver's Distraction/Inattention To Driving 49  
 (Prior To Recognition Of Critical Event)  
 (00) No driver present  
 (01) Attentive or not distracted  
 (02) Looked but did not see
- Distractions*  
 (03) By other occupant(s), (specify): \_\_\_\_\_  
 (04) By moving object in vehicle (specify): \_\_\_\_\_  
 (05) While talking or listening to cellular phone (specify location and type of phone): \_\_\_\_\_  
 (06) While dialing cellular phone (specify location and type of phone): \_\_\_\_\_  
 (07) While adjusting climate controls  
 (08) While adjusting radio, cassette, CD (specify): \_\_\_\_\_  
 (09) While using other device/object in vehicle (specify): \_\_\_\_\_  
 (10) Sleepy or fell asleep  
 (11) Distracted by outside person, object, or event (specify): \_\_\_\_\_  
 (12) Eating or drinking  
 (13) Smoking related  
 (97) Distracted/inattentive, details unknown  
 (98) Other, distraction (specify): \_\_\_\_\_  
 (99) Unknown
31. Pre-Event Movement (Prior to Recognition of Critical Event) 05  
 (00) No driver present  
 (01) Going straight  
 (02) Decelerating in traffic lane  
 (03) Accelerating in traffic lane  
 (04) Starting in traffic lane  
 (05) Stopped in traffic lane  
 (06) Passing or overtaking another vehicle  
 (07) Disabled or parked in travel lane  
 (08) Leaving a parking position  
 (09) Entering a parking position  
 (10) Turning right  
 (11) Turning left  
 (12) Making a U-turn  
 (13) Backing up (other than for parking position)  
 (14) Negotiating a curve  
 (15) Changing lanes  
 (16) Merging  
 (17) Successful avoidance maneuver to a previous critical event  
 (97) Other (specify): \_\_\_\_\_  
 (99) Unknown
32. Critical Precrash Event 53  
*This Vehicle Loss of Control Due To:*  
 (01) Blow out or flat tire  
 (02) Stalled engine  
 (03) Disabling vehicle failure (e.g., wheel fell off) (specify): \_\_\_\_\_  
 (04) Non-disabling vehicle problem (e.g., hood flew up) (specify): \_\_\_\_\_  
 (05) Poor road conditions (puddle, pot hole, ice, etc.) (specify): \_\_\_\_\_  
 (06) Traveling too fast for conditions  
 (08) Other cause of control loss (specify): \_\_\_\_\_  
 (09) Unknown cause of control loss

*This Vehicle Traveling*

- (10) Over the lane line on left side of travel lane  
 (11) Over the lane line on right side of travel lane  
 (12) Off the edge of the road on the left side  
 (13) Off the edge of the road on the right side  
 (14) End departure  
 (15) Turning left at intersection  
 (16) Turning right at intersection  
 (17) Crossing over (passing through) intersection  
 (18) This vehicle decelerating  
 (19) Unknown travel direction

*Other Motor Vehicle In Lane*

- (50) Other vehicle stopped  
 (51) Traveling in same direction with lower steady speed  
 (52) Traveling in same direction while decelerating  
 (53) Traveling in same direction with higher speed  
 (54) Traveling in opposite direction  
 (55) In crossover  
 (56) Backing  
 (59) Unknown travel direction of other motor vehicle in lane

*Other Motor Vehicle Encroaching Into Lane*

- (60) From adjacent lane (same direction)—over left lane line  
 (61) From adjacent lane (same direction)—over right lane line  
 (62) From opposite direction—over left lane line  
 (63) From opposite direction—over right lane line  
 (64) From parking lane  
 (65) From crossing street, turning into same direction  
 (66) From crossing street, across path  
 (67) From crossing street, turning into opposite direction  
 (68) From crossing street, intended path not known  
 (70) From driveway, turning into same direction  
 (71) From driveway, across path  
 (72) From driveway, turning into opposite direction  
 (73) From driveway, intended path not known  
 (74) From entrance to limited access highway  
 (78) Encroachment by other vehicle—details unknown

*Pedestrian, Pedalcyclist, or Other Nonmotorist*

- (80) Pedestrian in roadway  
 (81) Pedestrian approaching roadway  
 (82) Pedestrian—unknown location  
 (83) Pedalcyclist or other nonmotorist in roadway (specify): \_\_\_\_\_  
 (84) Pedalcyclist or other nonmotorist approaching roadway, (specify): \_\_\_\_\_  
 (85) Pedalcyclist or other nonmotorist—unknown location (specify): \_\_\_\_\_

*Object or Animal*

- (87) Animal in roadway  
 (88) Animal approaching roadway  
 (89) Animal—unknown location  
 (90) Object in roadway  
 (91) Object approaching roadway  
 (92) Object—unknown location  
 (98) Other critical precrash event (specify): \_\_\_\_\_  
 (99) Unknown

33. Attempted Avoidance Maneuver 01

- (00) No driver present
- (01) No avoidance maneuver
- (02) Braking (no lockup)
- (03) Braking (lockup)
- (04) Braking (lockup unknown)
- (05) Releasing brakes
- (06) Steering left
- (07) Steering right
- (08) Braking and steering left
- (09) Braking and steering right
- (10) Accelerating
- (11) Accelerating and steering left
- (12) Accelerating and steering right
- (98) Other action (specify):

(99) Unknown

34. Pre-Impact Stability 1

- (0) No driver present
- (1) Tracking
- (2) Skidding longitudinally—rotation less than 30 degrees
- (3) Skidding laterally—clockwise rotation
- (4) Skidding laterally—counterclockwise rotation
- (7) Other vehicle loss-of-control (specify):

(9) Precrash stability unknown

35. Pre-Impact Location 1

- (0) No driver present
- (1) Stayed in original travel lane
- (2) Stayed on roadway but left original travel lane
- (3) Stayed on roadway, not known if left original travel lane
- (4) Departed roadway
- (5) Remained off roadway
- (6) Returned to roadway
- (7) Entered roadway
- (9) Unknown

36. Accident Type 22

(Note: Applicable codes on back of this page)

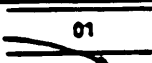
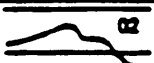






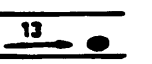
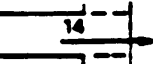
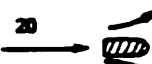

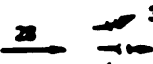






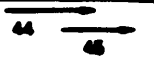
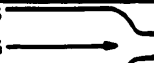

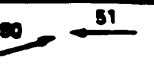



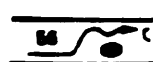






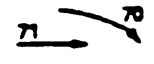

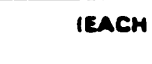
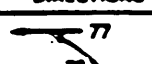
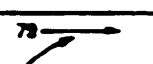
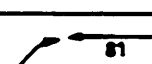

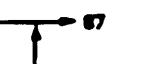




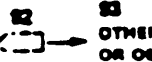

- (00) No impact

Code the number of the diagram that best describes the accident circumstance

- (98) Other accident type (specify):

(99) Unknown

**STOP HERE IF GV07 DOES NOT EQUAL 01 - 49**

Case group	Configuration	ACCIDENT TYPES (Includes Intent)					
I Single Driver	A Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH., PED., ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN	
	B Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH., PED., ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN	
	C Forward Impact	 11 PARKED VEH.	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER	16 SPECIFICS UNKNOWN
II Same Trafficway Same Direction	D Rear-End	 20 STOPPED 21, 22, 23	 24 SLOWER 25, 26, 27	 28 DECEL. 29, 30, 31	 (EACH - 32) SPECIFICS OTHER	 (EACH - 33) SPECIFICS UNKNOWN	
	E Forward Impact	 34 CONTROL/ TRACTION LOSS	 36 CONTROL/ TRACTION LOSS	 38 AVOID COLLISION WITH VEH.	 40 AVOID COLLISION WITH OBJECT	41 SPECIFICS OTHER	42 SPECIFICS UNKNOWN
	F Sideswipe Angle	 44 (EACH - 46) SPECIFICS OTHER	 46 (EACH - 48) SPECIFICS UNKNOWN	 47 (EACH - 49) SPECIFICS UNKNOWN			
III Same Trafficway Opposite Direction	G Head-On	 50 LATERAL MOVE	 51 (EACH - 62) SPECIFICS OTHER	 52 (EACH - 63) SPECIFICS UNKNOWN			
	H Forward Impact	 54 CONTROL/ TRACTION LOSS	 56 CONTROL/ TRACTION LOSS	 58 AVOID COLLISION WITH VEH.	 60 AVOID COLLISION WITH OBJECT	61 SPECIFICS OTHER	62 SPECIFICS UNKNOWN
	I Sideswipe Angle	 64 LATERAL MOVE	 65 (EACH - 66) SPECIFICS OTHER	 67 (EACH - 67) SPECIFICS UNKNOWN			
IV Change Trafficway Vehicle Turning	J Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 71 INITIAL SAME DIRECTIONS	 73 (EACH - 74) SPECIFICS OTHER	 72 (EACH - 75) SPECIFICS UNKNOWN		
	K Turn Into Path	 77 TURN INTO SAME DIRECTION	 78 TURN INTO OPPOSITE DIRECTIONS	 81 (EACH - 84) SPECIFICS OTHER	 82 (EACH - 85) SPECIFICS UNKNOWN		
V Intersecting Paths (Vehicle Damage)	L. Straight Paths	 87 (EACH - 90) SPECIFICS OTHER	 88 (EACH - 91) SPECIFICS UNKNOWN	 89 Other Accident Type	 90 Unknown Accident Type	 91 No Impact	
VI Miscellaneous	M Backing Etc	 92 BACKING VEH.	 93 OTHER VEH. OR OBJECT	94 Other Accident Type 95 Unknown Accident Type 96 No Impact			

## OCCUPANT RELATED

37. Driver Presence in Vehicle 1  
 (0) Driver not present  
 (1) Driver present  
 (9) Unknown
38. Number of Occupants This Vehicle 04  
 (00-96) Code actual number of occupants for this vehicle  
 (97) 97 or more  
 (99) Unknown
39. Number of Occupant Forms Submitted 04

## AIR BAG RELATED

40. Is this an AOPS Vehicle? 2  
 (0) No (includes unknown)  
 (1) Yes - researcher determined  
 (2) VIN determined air bag system  
 (3) VIN determined automatic (passive) belts  
 (4) VIN determined air bag and automatic (passive) belts
41. Air Bag(s) Deployment, First Seat Frontal 1  
 (0) Not equipped or not available  
 (1) No air bags deployed *per PAR*  
*Single Air Bag Vehicle*  
 (2) Driver air bag deployed  
 (3) Driver air bag, unknown if deployed  
*Multiple Air Bag Vehicle*  
 (4) Driver side only deployed  
 (5) Passenger side only deployed  
 (6) Driver and passenger side deployed  
 (7) Driver and passenger side unknown if deployed  
 (8) Air bag(s) deployed, details unknown  
 (9) Unknown
42. Air Bag(s) Deployment, Other Than First Seat Frontal 0  
 (0) Not equipped with an "other" air bag  
 (1) Deployed during accident (as a result of impact)  
 (2) Deployed inadvertently just prior to accident  
 (3) Deployed, details unknown  
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)  
 (5) Unknown if deployed  
 (7) Nondeployed  
 (9) Unknown

Specify type of "other" air bag present: \_\_\_\_\_

## VEHICLE WEIGHT ITEMS

43. Vehicle Curb Weight 1.300  
 Code weight to nearest 10 kilograms.  
 (045) Less than 450 kilograms  
 (610) 6,100 kilograms or more  
 (999) Unknown  
2872 lbs X .4536 = 1302.7 kgs  
 Source: \_\_\_\_\_

44. Vehicle Cargo Weight 9.990  
 Code weight to nearest 10 kilograms.  
 (000) Less than 5 kilograms  
 (450) 4,500 kilograms or more  
 (999) Unknown  
 \_\_\_\_\_ lbs X .4536 = \_\_\_\_\_ kgs

Source: \_\_\_\_\_

## ROLLOVER DATA

45. Rollover 00  
 (00) No rollover (no overturning)  
*Rollover (primarily about the longitudinal axis)*  
 (01-16) Code the number of quarter turns  
 (17) Rollover, 17 or more quarter turns (specify): \_\_\_\_\_  
 (98) Rollover--end-over-end (i.e., primarily about the lateral axis)  
 (99) Rollover (overturn), details unknown
46. Rollover Initiation Type 00  
 (00) No rollover  
 (01) Trip-over  
 (02) Flip-over  
 (03) Turn-over  
 (04) Climb-over  
 (05) Fall-over  
 (06) Bounce-over  
 (07) Collision with another vehicle  
 (08) Other rollover initiation type specify): \_\_\_\_\_  
 (98) Rollover--end-over-end  
 (99) Unknown rollover initiation type
47. Location of Rollover Initiation 0  
 (0) No rollover  
 (1) On roadway  
 (2) On shoulder--paved  
 (3) On shoulder--unpaved  
 (4) On roadside or divided trafficway median  
 (8) Rollover--end-over-end  
 (9) Unknown
48. Rollover Initiation Object Contacted 00  
 (Note: Applicable codes on back of page)
49. Location on Vehicle Where Initial Principal Tripping Force Is Applied 0  
 (0) No rollover  
 (1) Wheels/tires  
 (2) Side plane  
 (3) End plane  
 (4) Undercarriage  
 (5) Other location on vehicle (specify): \_\_\_\_\_  
 (6) Non-contact rollover forces (specify): \_\_\_\_\_  
 (8) Rollover--end-over-end  
 (9) Unknown
50. Direction of Initial Roll 0  
 (0) No rollover  
 (1) Roll right - primarily about the longitudinal axis  
 (2) Roll left - primarily about the longitudinal axis  
 (8) Rollover--end-over-end  
 (9) Unknown roll direction

because of V6



**VERRIDE/UNDERRIDE (THIS VEHICLE)**

51. Front Override/Underride (this Vehicle) 1
52. Rear Override/Underride (this Vehicle) 1
- (0) No override/underride, or not an end-to-end impact between two CDS applicable vehicles, and no medium/heavy truck or bus underride
- Override (see specific CDC)**  
*(Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49):*  
 (1) 1st CDC  
 (2) 2nd CDC  
 (3) Other not automated CDC (specify):  
 \_\_\_\_\_
- Underride (see specific CDC)**  
*(Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49):*  
 (4) 1st CDC  
 (5) 2nd CDC  
 (6) Other not automated CDC (specify):  
 \_\_\_\_\_
- (7) Medium/heavy truck or bus override (any configuration)  
 (9) Unknown

**HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V**

Values: (000)-(359) Code actual value  
 (997) Noncollision  
 (998) Impact with object  
 (999) Unknown

53. Heading Angle For This Vehicle 1 1
54. Heading Angle For Other Vehicle 1 1

**RECONSTRUCTION DATA**

55. Towed Trailing Unit 1
- (0) No towed unit  
 (1) Yes—towed trailing unit  
 (9) Unknown
56. Documentation of Trajectory Data for This Vehicle 1
- (0) No  
 (1) Yes
57. Post Collision Condition of Tree or Pole (For Highest Delta V) 2
- (0) Not collision (for highest delta V) with tree or pole  
 (1) Not damaged  
 (2) Cracked/sheared  
 (3) Tilted < 45 degrees  
 (4) Tilted ≥ 45 degrees  
 (5) Uprooted tree  
 (6) Separated pole from base  
 (7) Pole replaced  
 (8) Other (specify):  
 \_\_\_\_\_
- (9) Unknown

**ACCIDENT RECONSTRUCTION PROGRAMS HIGHEST DELTA V**

58. Basis for Total (Resultant) Delta V (highest) 1 1
- (00) No vehicle inspection
- Delta V Calculated**  
 (01) Reconstruction program -damage only routine  
 (02) Reconstruction program -damage and trajectory routine  
 (03) Missing vehicle algorithm
- Delta V Not Calculated**  
 (04) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program regardless of collision conditions.

*All vehicles within scope (CDC applicable) of reconstruction program but one of the collision conditions is beyond the scope of the reconstruction program or other acceptable reconstruction technique, regardless of adequacy of damage data.*

- (05) Rollover  
 (06) Other non-horizontal forces  
 (07) Sideswipe type damage  
 (08) Severe override  
 (09) Yielding object  
 (10) Overlapping damage  
 (11) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available, (specify):  
 \_\_\_\_\_

- (98) Other, (specify):  
 \_\_\_\_\_  
 \_\_\_\_\_

## COMPUTER GENERATED CRASH SEVERITY

59. Total Delta V

2263 Nearest kmph (highest)       Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)  
 (160) 159.5 kmph and above  
 (999) Unknown

60. Longitudinal Component of Delta V

2263 Nearest kmph (highest)       Nearest kmph (secondary)

(NOTE: \_000 means greater than  
 -0.5 kmph and less than +0.5 kmph)  
 (±160) ±159.5 kmph and above  
 (\_999) Unknown

61. Lateral Component of Delta V

00 Nearest kmph (highest)       Nearest kmph (secondary)

(NOTE: \_000 means greater than -0.5 kmph  
 and less than +0.5 kmph)  
 (±160) ±159.5 kmph and above  
 (\_999) Unknown

62. Energy Absorption

28704.6 Nearest 100 joules (highest)       Nearest 100 joules (secondary)

(NOTE: 0000 means less than 50 joules)  
 (9997) 999,650 joules or more  
 (9999) Unknown

63. Impact Speed

998 Nearest kmph (highest)       Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)  
 (160) 159.5 kmph and above  
 (998) Trajectory algorithm not run  
 (999) Unknown

## DELTA V CONFIDENCE LEVEL

64. Confidence In Reconstruction Program Results (For Highest Delta V)

- (0) No reconstruction  
 (1) Collision fits model — results appear reasonable  
 (2) Collision fits model — results appear high  
 (3) Collision fits model — results appear low  
 (4) Borderline reconstruction — results appear reasonable

## OTHER SPEED ESTIMATE

65. Barrier Equivalent Speed

999 Nearest kmph (highest)       Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)  
 (160) 159.5 kmph and above  
 (999) Unknown

IS MISSING VEHICLE ALGORITHM APPLICABLE FOR THIS VEHICLE? [☒] YES [ ] NOIF YES: IS A COMPLETED PROGRAM SUMMARY INCLUDED? [☒] YES [ ] NO

ESTIMATED DELTA V	VEHICLE INSPECTION
<p>66. Estimated Highest Delta V (Researcher Determined) <span style="float: right;"><u>0</u></span></p> <p>(0) Reconstruction Delta V coded</p> <p><i>Estimated Delta V</i></p> <p>(1) Less than 10 kmph</p> <p>(2) <math>\geq 10</math> kmph but <math>&lt; 25</math> kmph</p> <p>(3) <math>\geq 25</math> kmph but <math>&lt; 40</math> kmph</p> <p>(4) <math>\geq 40</math> kmph but <math>&lt; 55</math> kmph</p> <p>(5) <math>\geq 55</math> kmph</p> <p><i>Other estimates of damage severity</i></p> <p>(6) Minor</p> <p>(7) Moderate</p> <p>(8) Severe</p> <p>(9) Unknown</p>	<p>67. Type of Vehicle Inspection <span style="float: right;"><u>0</u></span></p> <p>(0) No inspection</p> <p>(1) Vehicle fully repaired-no damage evident</p> <p>(2) Partial inspection (specify): _____</p> <p>(3) Complete inspection</p>

\*\*\* IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV67=0), \*\*\*

DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS

\*\*\* IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE \*\*\*

THE EXTERIOR VEHICLE, INTERIOR VEHICLE,  
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.

**Appendix F:**

**NASS CDS GENERAL VEHICLE FORM: VEHICLE #3**



## GENERAL VEHICLE FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

### VEHICLE IDENTIFICATION

4. Vehicle Model Year  
Code the last two digits of the model year  
(99) Unknown

5. Vehicle Make (specify):

Chevrolet  
Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(99) Unknown

6. Vehicle Model (specify):

Astro 4x2  
Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(999) Unknown

7. Body Type

Note: Applicable codes may be found on  
the back of this page.

8. Vehicle Identification Number

1GCDM19ZLPB  
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17  
Left justify; Slash zeros and letter Z (0 and-Z)  
No VIN—Code all zeros Unknown—Code all nines

9. Vehicle Special Use (This Trip)

- (0) No special use  
(1) Taxi  
(2) Vehicle used as school bus  
(3) Vehicle used as other bus  
(4) Military  
(5) Police  
(6) Ambulance  
(7) Fire truck or car  
(8) Other (specify):  
(9) Unknown

### OFFICIAL RECORDS

10. Police Reported Vehicle Disposition

- (0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown

11. Police Reported Travel Speed

Code to the nearest kmph (NOTE: 000 means  
less than 0.5 kmph)  
(160) 159.5 kmph and above  
(999) Unknown

\_\_\_\_ mph X 1.6093 = \_\_\_\_ kmph

12. Speed Limit

(000) No statutory limit  
Code posted or statutory speed limit  
in kmph  
(999) Unknown

30 mph X 1.6093 = 48 kmph

13. Police Reported Alcohol Presence For Driver

- (0) No alcohol present  
(1) Yes alcohol present  
(7) Not reported  
(8) No driver present  
(9) Unknown

14. Alcohol Test Result For Driver

Code actual value (decimal implied  
before first digit—0.xx)  
(95) Test refused  
(96) None given  
(97) AC test performed, results unknown  
(98) No driver present  
(99) Unknown

Source: PAR

15. Police Reported Other Drug Presence For Driver

- (0) No other drug(s) present  
(1) Yes other drug(s) present  
(7) Not reported  
(8) No driver present  
(9) Unknown

16. Other Drug Specimen Test Result For Driver

- (0) No specimen test given  
(1) Drug(s) not found in specimen  
(2) Drug(s) found in specimen, (specify):  
(3) Specimen test given, results unknown or not  
obtained  
(8) No driver present  
(9) Unknown if specimen test given

17. Driver's Zip Code

(00001) Driver not a resident of U.S. or territories  
Code actual 5-digit zip code  
(99998) No driver present  
(99999) Unknown

18. Driver's Race/Ethnic Origin

- (1) White (non-Hispanic)  
(2) Black (non-Hispanic)  
(3) White (Hispanic)  
(4) Black (Hispanic)  
(5) American Indian, Eskimo or Aleut  
(6) Asian or Pacific Islander  
(7) Other (specify):  
(8) No driver present  
(9) Unknown

# CODES FOR BODY TYPE

## CDS APPLICABLE VEHICLES

### Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify):

(09) Unknown automobile type

### Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine - more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

### Utility Vehicles ( $\leq 4,500$ kgs GVWR)

- (14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Passport, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Hummer, Landcruiser, Rover, Scout, Yukon)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

### Van Based Light Trucks ( $\leq 4,500$ kgs GVWR)

- (20) Minivan (Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Vista, Aerostar, Windstar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Expo Wagon, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van ( $\leq 4,500$  kgs GVWR)
- (23) Van based motorhome ( $\leq 4,500$  kgs GVWR)
- (24) Van based school bus ( $\leq 4,500$  kgs GVWR)
- (25) Van based other bus ( $\leq 4,500$  kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify):

(29) Unknown van type

### Light Conventional Trucks (Pickup style cab, $\leq 4,500$ kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10 LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500, T100)

- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

### Other Light Trucks ( $\leq 4,500$ kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

## OTHER VEHICLES

### Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify):
- (59) Unknown bus type

### Medium/Heavy Trucks ( $> 4,500$ kgs GVWR)

- (60) Step van ( $> 4,500$  kgs GVWR)
- (61) Single unit straight truck ( $4,500$  kgs  $<$  GVWR  $\leq 8,850$  kgs)
- (62) Single unit straight truck ( $8,850$  kgs  $<$  GVWR  $\leq 12,000$  kgs)
- (63) Single unit straight truck ( $> 12,000$  kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

### Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify):
- (89) Unknown motored cycle type

### Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

## PRECRASH ENVIRONMENTAL DATA

19. Relation To Interchange Or Junction 2

- (0) Non-interchange area and non-junction  
(1) Interchange area related

*Non-Interchange junctions*

- (2) Intersection related  
(3) Driveway, alley access related  
(4) Other junction (specify) \_\_\_\_\_

(5) Unknown type of junction \_\_\_\_\_

(9) Unknown

20. Trafficway Flow 1

- (0) Not physically divided (two way traffic)  
(1) Divided trafficway-median strip without positive barrier  
(2) Divided trafficway-median strip with positive barrier  
(3) One way traffic  
(9) Unknown

21. Number Of Travel Lanes 5

- (1) One  
(2) Two  
(3) Three  
(4) Four  
(5) Five  
(6) Six  
(7) Seven or more  
(9) Unknown

22. Roadway Alignment 1

- (1) Straight  
(2) Curve right  
(3) Curve left  
(9) Unknown

23. Roadway Profile 1

- (1) Level  
(2) Uphill grade (> 2%)  
(3) Hill crest  
(4) Downhill grade (> 2%)  
(5) Sag  
(9) Unknown

24. Roadway Surface Type 2

- (1) Concrete  
(2) Bituminous (asphalt)  
(3) Brick or block  
(4) Slag, gravel, or stone  
(5) Dirt  
(8) Other (specify): \_\_\_\_\_  
(9) Unknown

25. Roadway Surface Condition 1

- (1) Dry  
(2) Wet  
(3) Snow or slush  
(4) Ice  
(5) Sand, dirt, or oil  
(8) Other (specify): \_\_\_\_\_  
(9) Unknown

26. Light Conditions 1

- (1) Daylight  
(2) Dark  
(3) Dark, but lighted  
(4) Dawn  
(5) Dusk  
(9) Unknown

27. Atmospheric Conditions 0

- (0) No adverse atmospheric-related driving conditions  
(1) Rain  
(2) Sleet/hail  
(3) Snow  
(4) Fog  
(5) Rain and fog  
(6) Sleet and fog  
(7) Other (e.g., smog, smoke, blowing sand or dust, etc.) (specify): \_\_\_\_\_  
(9) Unknown

28. Traffic Control Device 1

- (0) No traffic control(s)  
(1) Traffic control signal (not RR crossing)

*Regulatory*

- (2) Stop sign  
(3) Yield sign  
(4) School zone sign  
(5) Other regulatory sign (specify): \_\_\_\_\_

- (6) Warning sign (not RR crossing)  
(7) Unknown sign  
(8) Miscellaneous/other controls including RR controls (specify): \_\_\_\_\_

(9) Unknown

29. Traffic Control Device Functioning 2

- (0) No traffic control device  
(1) Traffic control device not functioning (specify): \_\_\_\_\_  
(2) Traffic control device functioning properly  
(9) Unknown

**PRECRASH DRIVER RELATED DATA**

30. Driver's Distraction/Inattention To Driving 99  
 (Prior To Recognition Of Critical Event)  
 (00) No driver present  
 (01) Attentive or not distracted  
 (02) Looked but did not see

*Distractions*

- (03) By other occupant(s), (specify): \_\_\_\_\_  
 (04) By moving object in vehicle (specify): \_\_\_\_\_  
 (05) While talking or listening to cellular phone  
 (specify location and type of phone): \_\_\_\_\_  
 (06) While dialing cellular phone (specify location  
 and type of phone): \_\_\_\_\_  
 (07) While adjusting climate controls  
 (08) While adjusting radio, cassette, CD (specify): \_\_\_\_\_  
 (09) While using other device/object in vehicle  
 (specify): \_\_\_\_\_  
 (10) Sleepy or fell asleep  
 (11) Distracted by outside person, object, or event  
 (specify): \_\_\_\_\_  
 (12) Eating or drinking  
 (13) Smoking related  
 (97) Distracted/inattentive, details unknown  
 (98) Other, distraction (specify): \_\_\_\_\_  
 (99) Unknown

31. Pre-Event Movement (Prior to  
 Recognition of Critical Event) 04  
 (00) No driver present  
 (01) Going straight  
 (02) Decelerating in traffic lane  
 (03) Accelerating in traffic lane  
 (04) Starting in traffic lane  
 (05) Stopped in traffic lane  
 (06) Passing or overtaking another vehicle  
 (07) Disabled or parked in travel lane  
 (08) Leaving a parking position  
 (09) Entering a parking position  
 (10) Turning right  
 (11) Turning left  
 (12) Making a U-turn  
 (13) Backing up (other than for parking position)  
 (14) Negotiating a curve  
 (15) Changing lanes  
 (16) Merging  
 (17) Successful avoidance maneuver to a previous  
 critical event  
 (97) Other (specify): \_\_\_\_\_  
 (99) Unknown

32. Critical Precrash Event 62  
*This Vehicle Loss of Control Due To:*  
 (01) Blow out or flat tire  
 (02) Stalled engine  
 (03) Disabling vehicle failure (e.g., wheel fell off)  
 (specify): \_\_\_\_\_  
 (04) Non-disabling vehicle problem (e.g., hood flew  
 up) (specify): \_\_\_\_\_  
 (05) Poor road conditions (puddle, pot hole, ice, etc.)  
 (specify): \_\_\_\_\_  
 (06) Traveling too fast for conditions  
 (08) Other cause of control loss (specify): \_\_\_\_\_  
 (09) Unknown cause of control loss

*This Vehicle Traveling*

- (10) Over the lane line on left side of travel lane  
 (11) Over the lane line on right side of travel lane  
 (12) Off the edge of the road on the left side  
 (13) Off the edge of the road on the right side  
 (14) End departure  
 (15) Turning left at intersection  
 (16) Turning right at intersection  
 (17) Crossing over (passing through) intersection  
 (18) This vehicle decelerating  
 (19) Unknown travel direction

*Other Motor Vehicle In Lane*

- (50) Other vehicle stopped  
 (51) Traveling in same direction with lower steady  
 speed  
 (52) Traveling in same direction while decelerating  
 (53) Traveling in same direction with higher speed  
 (54) Traveling in opposite direction  
 (55) In crossover  
 (56) Backing  
 (59) Unknown travel direction of other motor  
 vehicle in lane

*Other Motor Vehicle Encroaching Into Lane*

- (60) From adjacent lane (same direction)—over left  
 lane line  
 (61) From adjacent lane (same direction)—over right  
 lane line  
 (62) From opposite direction—over left lane line  
 (63) From opposite direction—over right lane line  
 (64) From parking lane  
 (65) From crossing street, turning into same  
 direction  
 (66) From crossing street, across path  
 (67) From crossing street, turning into opposite  
 direction  
 (68) From crossing street, intended path not known  
 (70) From driveway, turning into same direction  
 (71) From driveway, across path  
 (72) From driveway, turning into opposite direction  
 (73) From driveway, intended path not known  
 (74) From entrance to limited access highway  
 (78) Encroachment by other vehicle—details  
 unknown

*Pedestrian, Pedalcyclist, or Other Nonmotorist*

- (80) Pedestrian in roadway  
 (81) Pedestrian approaching roadway  
 (82) Pedestrian—unknown location  
 (83) Pedalcyclist or other nonmotorist in roadway  
 (specify): \_\_\_\_\_  
 (84) Pedalcyclist or other nonmotorist approaching  
 roadway, (specify): \_\_\_\_\_  
 (85) Pedalcyclist or other nonmotorist—unknown  
 location (specify): \_\_\_\_\_

*Object or Animal*

- (87) Animal in roadway  
 (88) Animal approaching roadway  
 (89) Animal—unknown location  
 (90) Object in roadway  
 (91) Object approaching roadway  
 (92) Object—unknown location  
 (98) Other critical precrash event (specify): \_\_\_\_\_  
 (99) Unknown



33. Attempted Avoidance Maneuver 01

- (00) No driver present  
(01) No avoidance maneuver  
(02) Braking (no lockup)  
(03) Braking (lockup)  
(04) Braking (lockup unknown)  
(05) Releasing brakes  
(06) Steering left  
(07) Steering right  
(08) Braking and steering left  
(09) Braking and steering right  
(10) Accelerating  
(11) Accelerating and steering left  
(12) Accelerating and steering right  
(98) Other action (specify):

(99) Unknown

34. Pre-Impact Stability 1

- (0) No driver present  
(1) Tracking  
(2) Skidding longitudinally—rotation less than 30 degrees  
(3) Skidding laterally—clockwise rotation  
(4) Skidding laterally—counterclockwise rotation  
(7) Other vehicle loss-of-control (specify):

(9) Precrash stability unknown

35. Pre-Impact Location 1

- (0) No driver present  
(1) Stayed in original travel lane  
(2) Stayed on roadway but left original travel lane  
(3) Stayed on roadway, not known if left original travel lane  
(4) Departed roadway  
(5) Remained off roadway  
(6) Returned to roadway  
(7) Entered roadway  
(9) Unknown

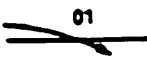


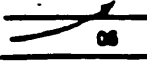
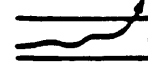




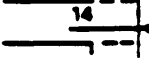
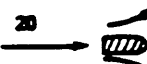
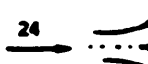

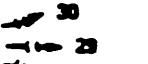
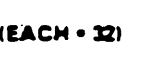

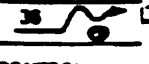

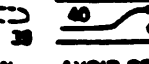







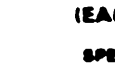







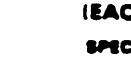


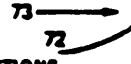














36. Accident Type 98

(Note: Applicable codes on back of this page)

- (00) No impact  
Code the number of the diagram that best describes the accident circumstance  
(98) Other accident type (specify):

(99) Unknown

STOP HERE IF GV07 DOES NOT EQUAL 01 - 49

Code given	Configuration	ACCIDENT TYPES (Includes Intent)					
I Single Driver	A Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH., PED., ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN	
	B Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH., PED., ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN	
	C Forward Impact	 11 PARKED VEH.	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER	16 SPECIFICS UNKNOWN
II Same Trafficway Same Direction	D Rear-End	 20 STOPPED 21, 22, 23	 24 SLOWER 26, 28, 27	 28 DECEL. 29, 30, 31	 (EACH - 32) SPECIFICS OTHER	 (EACH - 33) SPECIFICS UNKNOWN	
	E Forward Impact	 34 CONTROL/ TRACTION LOSS	 36 CONTROL/ TRACTION LOSS	 38 AVOID COLLISION WITH VEH.	 40 AVOID COLLISION WITH OBJECT	 (EACH - 42) (EACH - 43) SPECIFICS OTHER SPECIFICS UNKNOWN	
	F Sideswipe Angle	 44 45 46 47	 45 46 47	 (EACH - 48) SPECIFICS OTHER	 (EACH - 49) SPECIFICS UNKNOWN		
III Same Trafficway Opposite Direction	G Head-On	 80 LATERAL MOVE	 (EACH - 82) SPECIFICS OTHER	 (EACH - 83) SPECIFICS UNKNOWN			
	H Forward Impact	 64 CONTROL/ TRACTION LOSS	 66 CONTROL/ TRACTION LOSS	 68 AVOID COLLISION WITH VEH.	 70 AVOID COLLISION WITH OBJECT	 (EACH - 62) (EACH - 63) SPECIFICS OTHER SPECIFICS UNKNOWN	
	I Sideswipe Angle	 64 LATERAL MOVE	 (EACH - 65) SPECIFICS OTHER	 (EACH - 67) SPECIFICS UNKNOWN			
IV Change Trafficway Vehicle Turning	J Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 71 INITIAL SAME DIRECTIONS	 73 72	 (EACH - 74) (EACH - 75) SPECIFICS OTHER SPECIFICS UNKNOWN		
	K Turn Into Path	 77 78 TURN INTO SAME DIRECTION	 79 78 TURN INTO SAME DIRECTION	 80 81 TURN INTO OPPOSITE DIRECTIONS	 (EACH - 84) (EACH - 85) SPECIFICS OTHER SPECIFICS UNKNOWN		
V Intersecting Paths (Vehicle Damage)	L Straight Paths	 87 88	 89 88	 (EACH - 90) SPECIFICS OTHER	 (EACH - 91) SPECIFICS UNKNOWN		
VI Miscellaneous	M Backing Etc	 92 BACKING VEH.	 93 OTHER VEH. OR OBJECT	 94 Other Accident Type	 95 Unknown Accident Type	 96 No Impact	

## OCCUPANT RELATED

37. Driver Presence in Vehicle 1  
 (0) Driver not present  
 (1) Driver present  
 (9) Unknown
38. Number of Occupants This Vehicle 01  
 (00-96) Code actual number of occupants for this vehicle  
 (97) 97 or more  
 (99) Unknown
39. Number of Occupant Forms Submitted 00

## AIR BAG RELATED

40. Is this an AOPS Vehicle? 0  
 (0) No (includes unknown)  
 (1) Yes - researcher determined  
 (2) VIN determined air bag system  
 (3) VIN determined automatic (passive) belts  
 (4) VIN determined air bag and automatic (passive) belts
41. Air Bag(s) Deployment, First Seat Frontal 0  
 (0) Not equipped or not available  
 (1) No air bags deployed  
*Single Air Bag Vehicle*  
 (2) Driver air bag deployed  
 (3) Driver air bag, unknown if deployed  
*Multiple Air Bag Vehicle*  
 (4) Driver side only deployed  
 (5) Passenger side only deployed  
 (6) Driver and passenger side deployed  
 (7) Driver and passenger side unknown if deployed  
 (8) Air bag(s) deployed, details unknown  
 (9) Unknown
42. Air Bag(s) Deployment, Other Than First Seat Frontal 0  
 (0) Not equipped with an "other" air bag  
 (1) Deployed during accident (as a result of impact)  
 (2) Deployed inadvertently just prior to accident  
 (3) Deployed, details unknown  
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)  
 (5) Unknown if deployed  
 (7) Nondeployed  
 (9) Unknown
- Specify type of "other" air bag present: \_\_\_\_\_

## VEHICLE WEIGHT ITEMS

43. Vehicle Curb Weight 1.650  
 \_\_\_\_\_ Code weight to nearest 10 kilograms.  
 (045) Less than 450 kilograms  
 (610) 6,100 kilograms or more  
 (999) Unknown  
3633 lbs X .4536 = 1.6479 kgs  
 Source: \_\_\_\_\_

44. Vehicle Cargo Weight 9.990  
 \_\_\_\_\_ Code weight to nearest 10 kilograms.  
 (000) Less than 5 kilograms  
 (450) 4,500 kilograms or more  
 (999) Unknown  
 \_\_\_\_\_ lbs X .4536 = \_\_\_\_\_ kgs

Source: \_\_\_\_\_

## ROLLOVER DATA

45. Rollover 00  
 (00) No rollover (no overturning)  
*Rollover (primarily about the longitudinal axis)*  
 (01-16) Code the number of quarter turns  
 (17) Rollover, 17 or more quarter turns (specify): \_\_\_\_\_  
 (98) Rollover--end-over-end (i.e., primarily about the lateral axis)  
 (99) Rollover (overturn), details unknown
46. Rollover Initiation Type 00  
 (00) No rollover  
 (01) Trip-over  
 (02) Flip-over  
 (03) Turn-over  
 (04) Climb-over  
 (05) Fall-over  
 (06) Bounce-over  
 (07) Collision with another vehicle  
 (08) Other rollover initiation type specify): \_\_\_\_\_  
 (98) Rollover--end-over-end  
 (99) Unknown rollover initiation type
47. Location of Rollover Initiation 0  
 (0) No rollover  
 (1) On roadway  
 (2) On shoulder--paved  
 (3) On shoulder--unpaved  
 (4) On roadside or divided trafficway median  
 (8) Rollover--end-over-end  
 (9) Unknown
48. Rollover Initiation Object Contacted 00  
 (Note: Applicable codes on back of page)
49. Location on Vehicle Where Initial Principal Tripping Force Is Applied 0  
 (0) No rollover  
 (1) Wheels/tires  
 (2) Side plane  
 (3) End plane  
 (4) Undercarriage  
 (5) Other location on vehicle (specify): \_\_\_\_\_  
 (6) Non-contact rollover forces (specify): \_\_\_\_\_  
 (8) Rollover--end-over-end  
 (9) Unknown
50. Direction of Initial Roll 0  
 (0) No rollover  
 (1) Roll right - primarily about the longitudinal axis  
 (2) Roll left - primarily about the longitudinal axis  
 (8) Rollover--end-over-end  
 (9) Unknown roll direction

**OVERRIDE/UNDERRIDE (THIS VEHICLE)**51. Front Override/Underride (this Vehicle) 952. Rear Override/Underride (this Vehicle) 0

- (0) No override/underride, or not an end-to-end impact between two CDS applicable vehicles, and no medium/heavy truck or bus underride

**Override (see specific CDC)***(Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49))*

- (1) 1st CDC  
(2) 2nd CDC  
(3) Other not automated CDC (specify):  
\_\_\_\_\_

**Underride (see specific CDC)***(Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49))*

- (4) 1st CDC  
(5) 2nd CDC  
(6) Other not automated CDC (specify):  
\_\_\_\_\_

- (7) Medium/heavy truck or bus override (of any configuration)  
(9) Unknown

**HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V**

Values: (000)-(359) Code actual value  
(997) Noncollision  
(998) Impact with object  
(999) Unknown

53. Heading Angle For This Vehicle               54. Heading Angle For Other Vehicle               **RECONSTRUCTION DATA**55. Towed Trailing Unit 2

- (0) No towed unit  
(1) Yes—towed trailing unit  
(9) Unknown

56. Documentation of Trajectory Data for This Vehicle 0

- (0) No  
(1) Yes

57. Post Collision Condition of Tree or Pole (For Highest Delta V) 0

- (0) Not collision (for highest delta V) with tree or pole  
(1) Not damaged  
(2) Cracked/sheared  
(3) Tilted < 45 degrees  
(4) Tilted ≥ 45 degrees  
(5) Uprooted tree  
(6) Separated pole from base  
(7) Pole replaced  
(8) Other (specify):  
\_\_\_\_\_

(9) Unknown

**ACCIDENT RECONSTRUCTION PROGRAMS HIGHEST DELTA V**58. Basis for Total (Resultant) Delta V (highest) 00

(00) No vehicle inspection

**Delta V Calculated**

- (01) Reconstruction program  
-damage only routine  
(02) Reconstruction program  
-damage and trajectory routine  
(03) Missing vehicle algorithm

**Delta V Not Calculated**

- (04) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.

*All vehicles within scope (CDC applicable) of reconstruction program but one of the collision conditions is beyond the scope of the reconstruction program or other acceptable reconstruction technique, regardless of adequacy of damage data.*

- (05) Rollover  
(06) Other non-horizontal forces  
(07) Sideswipe type damage  
(08) Severe override  
(09) Yielding object  
(10) Overlapping damage  
(11) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available, (specify):  
\_\_\_\_\_  
\_\_\_\_\_

(98) Other, (specify): \_\_\_\_\_  
\_\_\_\_\_

## COMPUTER GENERATED CRASH SEVERITY

59. Total Delta V

999

\_\_\_\_ Nearest kmph (highest)

\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)  
 (160) 159.5 kmph and above  
 (999) Unknown

60. Longitudinal Component of  
Delta V

Highest

+  
- 999

\_\_\_\_ Nearest kmph (highest)

\_\_\_\_ Nearest kmph (secondary)

(NOTE: \_\_000 means greater than  
 -0.5 kmph and less than +0.5 kmph)  
 (±160) ±159.5 kmph and above  
 (\_999) Unknown

61. Lateral Component of Delta V

Highest

+  
- 999

\_\_\_\_ Nearest kmph (highest)

\_\_\_\_ Nearest kmph (secondary)

(NOTE: \_\_000 means greater than -0.5 kmph  
 and less than +0.5 kmph)  
 (±160) ±159.5 kmph and above  
 (\_999) Unknown

62. Energy Absorption

999.9 00

\_\_\_\_ Nearest 100 joules (highest)

\_\_\_\_ Nearest 100 joules (secondary)

(NOTE: 0000 means less than 50 joules)  
 (9997) 999,650 joules or more  
 (9999) Unknown

63. Impact Speed

Highest

999

\_\_\_\_ Nearest kmph (highest)

\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)  
 (160) 159.5 kmph and above  
 (998) Trajectory algorithm not run  
 (999) Unknown

## DELTA V CONFIDENCE LEVEL

64. Confidence In Reconstruction Program  
Results (For Highest Delta V)

- (0) No reconstruction 0  
 (1) Collision fits model — results appear reasonable  
 (2) Collision fits model — results appear high  
 (3) Collision fits model — results appear low  
 (4) Borderline reconstruction — results appear reasonable

## OTHER SPEED ESTIMATE

65. Barrier Equivalent Speed

Highest

999

\_\_\_\_ Nearest kmph (highest)

\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)  
 (160) 159.5 kmph and above  
 (999) Unknown

IS MISSING VEHICLE ALGORITHM APPLICABLE FOR THIS VEHICLE? [ ] YES [✓] NO

IF YES: IS A COMPLETED PROGRAM SUMMARY INCLUDED? [ ] YES [ ] NO

ESTIMATED DELTA V	VEHICLE INSPECTION
<p>66. Estimated Highest Delta V (Researcher Determined) <span style="float: right;">2</span></p> <p>(0) Reconstruction Delta V coded</p> <p><i>Estimated Delta V</i></p> <p>(1) Less than 10 kmph</p> <p>(2) <math>\geq 10</math> kmph but <math>&lt; 25</math> kmph</p> <p>(3) <math>\geq 25</math> kmph but <math>&lt; 40</math> kmph</p> <p>(4) <math>\geq 40</math> kmph but <math>&lt; 55</math> kmph</p> <p>(5) <math>\geq 55</math> kmph</p> <p><i>Other estimates of damage severity</i></p> <p>(6) Minor</p> <p>(7) Moderate</p> <p>(8) Severe</p> <p>(9) Unknown</p>	<p>67. Type of Vehicle Inspection <span style="float: right;">0</span></p> <p>(0) No inspection</p> <p>(1) Vehicle fully repaired-no damage evident</p> <p>(2) Partial inspection (specify):</p> <p>(3) Complete inspection</p>

\*\*\* IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV67 = 0), \*\*\*

DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS

\*\*\* IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE \*\*\*

THE EXTERIOR VEHICLE, INTERIOR VEHICLE,  
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.

**Appendix G:**

**NASS CDS INTERVIEW FORMS:**

**VEHICLE #2 DRIVER**



## INTERVIEW FORM (A)

1. Primary Sampling Unit Number	<u>10</u>	Interviewee(s) Role or Name(s):	<u>Husband of</u>
2. Case Number - Stratum	<u>9505</u>		<u>DRIVER / Father of children</u>
3. Vehicle Number	<u>02</u>		<u>AS well as DRIVER</u>

Review all available information and interview questions prior to conducting interview(s) to ensure the acquisition of all pertinent data.

If the driver was not the person interviewed, was an appointment made for a follow-up interview?

### DRIVER'S DESCRIPTION OF ACCIDENT EVENTS

Stopped waiting to turn (L) at light  
got hit from REAR and pushed forward  
Went about 150' before coming to A stop  
FACING NNW/N middle of street

I had my foot on BRAKE the whole  
time

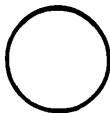
### OCCUPANT'S DESCRIPTION OF ACCIDENT EVENTS

### SPECIFIC QUESTIONS TO ASK INTERVIEWEE

the driver of other car



## ACCIDENT DIAGRAM



NORTH

The use of this diagram is optional. It may serve to aid in relating interviewee accident trajectory data (i.e., pre-impact to FRP orientations) to identifiable objects in the environment.

CRASH DATA INFORMATION	
IF POSSIBLE OBTAIN THIS INFORMATION FROM THE DRIVER:	
SOURCE OF INFORMATION:	<input checked="" type="checkbox"/> Driver <input type="checkbox"/> Other occupant <input checked="" type="checkbox"/> Relative/friend
In which direction were you traveling?	<input checked="" type="checkbox"/> North <input type="checkbox"/> South <input type="checkbox"/> East <input type="checkbox"/> West (Or where were they coming from or going to?)
What lane were you in?	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> Other Note: lane 1 is the right curb lane
What was the condition of the roadway?	<input checked="" type="checkbox"/> Dry <input type="checkbox"/> Wet <input type="checkbox"/> Snow <input type="checkbox"/> Slush <input type="checkbox"/> Ice <input type="checkbox"/> Sand, dirt, oil <input type="checkbox"/> Other (specify):
What was the weather like? (Check all that apply)	<input checked="" type="checkbox"/> No adverse conditions <input type="checkbox"/> Rain <input type="checkbox"/> Fog <input type="checkbox"/> Sleet <input type="checkbox"/> Hail <input type="checkbox"/> Snow <input type="checkbox"/> Other (specify):
Was there any type of sign or signal present?  (check all that apply)	<input checked="" type="checkbox"/> Traffic control signal (includes flashing beacons, lane control signals, and green / amber / red signal) <input type="checkbox"/> Stop sign <input type="checkbox"/> Yield sign <input type="checkbox"/> School zone sign <input type="checkbox"/> Other regulatory sign (No "U" turn, left turn only, wrong way, etc.) specify: _____ <input type="checkbox"/> Warning sign (Winding road sign, stop ahead, intersection signs, etc.) specify: _____ <input type="checkbox"/> Miscellaneous control (including railroad controls) specify: _____ <input type="checkbox"/> None <input type="checkbox"/> Unknown
If a traffic control device was present, was it functioning properly at the time of the crash?	<input type="checkbox"/> No traffic control device present <input type="checkbox"/> Not functioning properly (includes defaced, badly worn, covered with snow, rotated etc.) specify: _____ <input checked="" type="checkbox"/> Functioning properly <input type="checkbox"/> Unknown
Can you estimate your travel speed before the crash? (in mph)	<input checked="" type="checkbox"/> Stopped <input type="checkbox"/> 11-20 <input type="checkbox"/> 31-40 <input type="checkbox"/> 51-60 <input type="checkbox"/> 70+ <input type="checkbox"/> 1-10 <input type="checkbox"/> 21-30 <input type="checkbox"/> 41-50 <input type="checkbox"/> 61-70 <input type="checkbox"/> Unknown
Just before the crash, what were you doing or intending to do? (check all that apply)	<input type="checkbox"/> Going straight <input type="checkbox"/> Stopped <input checked="" type="checkbox"/> Turning left <input type="checkbox"/> Turning right <input type="checkbox"/> Slowing <input type="checkbox"/> Accelerating <input type="checkbox"/> Backing <input type="checkbox"/> Changing lanes to right <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Changing lanes to left
Did vehicle lose control due to weather or mechanical problems?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes (describe)
Did driver take avoidance actions? <input type="checkbox"/> Yes (Check all that apply) → <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Braking with lock-up <input type="checkbox"/> Accelerating <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Braking without lock-up <input type="checkbox"/> Steering left <input type="checkbox"/> Releasing brakes <input type="checkbox"/> Steering right
Where was vehicle at time of collision?	<input checked="" type="checkbox"/> Original travel lane <input type="checkbox"/> Different travel lane <input type="checkbox"/> In intersection <input type="checkbox"/> Off roadway to right <input type="checkbox"/> Off roadway to left <input type="checkbox"/> Other (specify): _____
Can you estimate your travel speed at the time of collision? (in mph)	<input checked="" type="checkbox"/> Stopped <input type="checkbox"/> 11-20 <input type="checkbox"/> 31-40 <input type="checkbox"/> 51-60 <input type="checkbox"/> 70+ <input type="checkbox"/> 1-10 <input type="checkbox"/> 21-30 <input type="checkbox"/> 41-50 <input type="checkbox"/> 61-70 <input type="checkbox"/> Unknown
Describe all the impacts to the vehicle, including what the vehicle contacted) and how this vehicle moved to its stopped position, after the collision?	only 1
What race does the driver consider themselves?	<input checked="" type="checkbox"/> White <input type="checkbox"/> American Indian, Eskimo or Aleut, Asian or Pacific Islander <input type="checkbox"/> Black <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown
Is the driver of Hispanic origin?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown

## VEHICLE INFORMATION

## ROLLOVER DATA

## DID THIS VEHICLE ROLL OVER DURING THE CRASH?

- ☐ YES -- ASK THE FOLLOWING QUESTIONS  
☒ NO -- SKIP TO "FIRE DATA" BELOW  
☐ UNKNOWN -- SKIP TO "FIRE DATA" BELOW

Describe where the rollover began	<input type="checkbox"/> On roadway <input type="checkbox"/> On shoulder <input type="checkbox"/> On roadside or median <input type="checkbox"/> Unknown
What caused the vehicle to roll over?	<input type="checkbox"/> Other vehicle (specify vehicle number) _____ <input type="checkbox"/> Contact to object (specify): _____ <input type="checkbox"/> Other cause (specify): _____ <input type="checkbox"/> Unknown
Which direction did the vehicle roll?	<input type="checkbox"/> Toward the right (passenger side) <input type="checkbox"/> Toward the left (driver side) <input type="checkbox"/> End-over-end <input type="checkbox"/> Unknown
Estimate the number of quarter turns (each side) or complete turns (4 quarter turns) the vehicle did	_____ Number of quarter turns <input type="checkbox"/> Unknown _____ Number of complete turns
When the vehicle stopped rolling over, which side was in contact with the ground?	<input type="checkbox"/> Left side <input type="checkbox"/> Top <input type="checkbox"/> Right side <input type="checkbox"/> Wheels <input type="checkbox"/> Unknown

## FIRE DATA

## DID THIS VEHICLE EXPERIENCE A FIRE?

- ☐ YES -- ASK THE FOLLOWING QUESTIONS  
☒ NO -- SKIP THIS SECTION  
☐ UNKNOWN -- SKIP THIS SECTION

Describe where the fire started, or where the smoke was first seen	<input type="checkbox"/> Under the hood <input type="checkbox"/> In the trunk/cargo area <input type="checkbox"/> Behind the instrument panel <input type="checkbox"/> Under the vehicle <input type="checkbox"/> In the passenger compartment <input type="checkbox"/> From other involved vehicle <input type="checkbox"/> Unknown
Did the fire start with the electrical system?	<input type="checkbox"/> No <input type="checkbox"/> Yes (specify): _____ <input type="checkbox"/> Unknown
Did the fire start with the fuel system?	<input type="checkbox"/> No <input type="checkbox"/> Yes (specify): _____ <input type="checkbox"/> Unknown
<b>ASK IF THE FIRE INVOLVED THE FUEL SYSTEM</b> Which part of the fuel system may have been involved?	<input type="checkbox"/> Fuel tank <input type="checkbox"/> Fuel lines <input type="checkbox"/> Engine compartment (specify component if known) _____ <input type="checkbox"/> Unknown

Describe any additional rollover or fire information here:

## ADDITIONAL VEHICLE INFORMATION

<p>IF THIS VEHICLE HAS NOT BEEN INSPECTED ASK THIS QUESTION:</p> <p>What is the year, make and model of your vehicle?</p>	<p>Year: 19 <u>94</u></p> <p>Make: <u>OLDS Mobile</u></p> <p>Model: <u>Cutlass Ciera</u></p>
<p>Was there any damage to the vehicle that is not related to this crash?</p>	<p><input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes - describe:  <input type="checkbox"/> Unknown</p>
<p>Did any of the doors or hatch come open during the crash?</p>	<p><input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes - describe:  <input type="checkbox"/> Unknown</p>
<p>Did any of the windows break during the crash?</p>	<p><input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes - describe: <u>REAR BACKLIGHT Blown out by impact.</u>  <input type="checkbox"/> Unknown</p>
<p>Were any windows open (O) or partially open (P) prior to the crash?</p>	<p><input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes * * "O" = open "P" = partially open</p> <p><input type="checkbox"/> WS <input type="checkbox"/> LF <input checked="" type="checkbox"/> RF <input type="checkbox"/> LR <input type="checkbox"/> RR  <input type="checkbox"/> BL <input type="checkbox"/> Roof <input type="checkbox"/> Other  <input type="checkbox"/> Unknown</p>
<p>Did the glove compartment door come open during the crash?</p>	<p><input type="checkbox"/> No  <input type="checkbox"/> Yes - describe:  <input checked="" type="checkbox"/> Unknown</p>
<p>Was there any cargo in the vehicle at the time of the crash?</p>	<p><input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes - describe: <u>4 pillows, shoes, coats</u>          Approximate weight - <u>10</u> pounds  <input type="checkbox"/> Unknown</p>
<p>Approximate mileage on the vehicle?</p>	<p>_____ miles  <input checked="" type="checkbox"/> Unknown <u>RENTAL</u></p>
<p>If you have not inspected the vehicle, or permission is needed, ask if you may look at their vehicle to assess the damage and ascertain the following:</p>	<p>Current location of the vehicle: _____          Contact person: _____</p>
<p>Detail any notes, questions to ask interviewee (i.e., rescue personnel damage to vehicle) or directions to vehicle location here:</p> <p><u>The DRIVER SEAT frame broke from floor went back onto daughters @ foot/leg</u></p>	

## SPECIAL CRASH INVESTIGATION ADDENDUM: DRIVER INFORMATION

Do you recall the type of development in the area of the crash?	<input type="checkbox"/> Residential <input type="checkbox"/> Industrial <input type="checkbox"/> Undeveloped <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Agricultural <input type="checkbox"/> School
What were the weather conditions at the time of the crash?	<input checked="" type="checkbox"/> Clear (no clouds, no precipitation) <input type="checkbox"/> Cloudy (partially cloudy, no precipitation) <input type="checkbox"/> Overcast (full cloud cover, no precipitation) <input type="checkbox"/> Precipitating <input type="checkbox"/> Unknown	
What was the type of precipitation?	<input checked="" type="checkbox"/> No precipitation <input type="checkbox"/> Unknown <input type="checkbox"/> Raining <input type="checkbox"/> Freezing rain <input type="checkbox"/> Sleet <input type="checkbox"/> Snowing <input type="checkbox"/> Hailing	
What was the condition of the road surface?	<input checked="" type="checkbox"/> Dry <input type="checkbox"/> Wet <input type="checkbox"/> Snowy, slushy <input type="checkbox"/> Icy <input type="checkbox"/> Other (e.g., sand, dirt, oil on surface, etc.) <input type="checkbox"/> Unknown	
How would you describe the amount of traffic at the time of the crash?	<input type="checkbox"/> Heavy <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Light <input type="checkbox"/> No other traffic present	
What is your occupation?	<input type="checkbox"/> Professional <input type="checkbox"/> Technical <input type="checkbox"/> Government official <input type="checkbox"/> Management <input type="checkbox"/> Proprietors <input type="checkbox"/> Sales <input type="checkbox"/> Clerical <input type="checkbox"/> Craftsman and foreman <input type="checkbox"/> Service worker <input type="checkbox"/> Student <input type="checkbox"/> Farmers and farm-managers <input type="checkbox"/> Farm labors and foreman <input type="checkbox"/> Private household worker <input type="checkbox"/> Housewife <input type="checkbox"/> Other: <u>TEACHER</u>	
How long have you driven this vehicle?	Years: _____	Months: <u>few DAYS (Rental car)</u>
How many miles do you think that you have driven it in the last 12-month period?	Miles: <u>UNK</u> <u>50</u> this car	
How often do you drive this particular roadway?	<input type="checkbox"/> Daily <input type="checkbox"/> Twice weekly <input type="checkbox"/> Once weekly <input type="checkbox"/> Twice monthly <input type="checkbox"/> Once monthly <input checked="" type="checkbox"/> Very infrequently <input type="checkbox"/> First time on road	
Where were you coming from just prior to the crash?	<input type="checkbox"/> Home <input type="checkbox"/> Work <input type="checkbox"/> School <input checked="" type="checkbox"/> Shopping <input type="checkbox"/> Social/recreational <input checked="" type="checkbox"/> Restaurant <input type="checkbox"/> Personal business <input type="checkbox"/> Other: _____	
Where were you intending to go when the crash occurred?	<input checked="" type="checkbox"/> Home <u>mothers</u> <input type="checkbox"/> Work <input type="checkbox"/> School <input type="checkbox"/> Shopping <input type="checkbox"/> Social/recreational <input type="checkbox"/> Restaurant <input type="checkbox"/> Personal business <input type="checkbox"/> Other: _____	

## OCCUPANT DATA QUESTIONS

How many people were in your vehicle at the time of the crash? 4

	DRIVER	OCCUPANT # <u>2</u>	OCCUPANT # <u>3</u>
Where was this person sitting in the vehicle?  Front Left (FL)              Second Left (2L) Front Middle (FM)        Second Middle (2M) Front Right (FR)        Second Right (2R)  Third Left (3L)            Other (SPECIFY in block) Third Middle (3M) Third Right (3R)	FRONT LEFT	FR	2L
What is the Sex, Height, Weight, and Age of each occupant?	<input type="checkbox"/> M <input checked="" type="checkbox"/> F - Not pregnant <input type="checkbox"/> F - Pregnant - # of months _____ <input type="checkbox"/> F - Unk. if pregnant  HEIGHT: <u>5'3</u> WEIGHT: <u>110</u> AGE: <u>45</u>	<input type="checkbox"/> M <input checked="" type="checkbox"/> F - Not pregnant <input type="checkbox"/> F - Pregnant - # of months _____ <input type="checkbox"/> F - Unk. if pregnant  HEIGHT: <u>5'8</u> WEIGHT: <u>110</u> AGE: <u>20</u>	<input type="checkbox"/> M <input checked="" type="checkbox"/> F - Not pregnant <input type="checkbox"/> F - Pregnant - # of months _____ <input type="checkbox"/> F - Unk. if pregnant  HEIGHT: <u>5'1</u> WEIGHT: <u>100</u> AGE: <u>16</u>
Describe how occupant was seated  A) Kneeling or standing on seat B) Lying on or across seat C) Kneeling, standing or sitting in front of seat D) Sitting sideways, turned to side or back E) Sitting on console F) Lying back in reclined position G) Other (specify) H) Unknown	<input type="checkbox"/> Leaning to left <input type="checkbox"/> Leaning to right <input checked="" type="checkbox"/> Sitting upright <input type="checkbox"/> Unknown  Indicate all letters that apply and describe if other than above	<input type="checkbox"/> Leaning to left <input type="checkbox"/> Leaning to right <input checked="" type="checkbox"/> Sitting upright <input type="checkbox"/> Unknown  Indicate all letters that apply and describe if other than above	<input type="checkbox"/> Leaning to left <input type="checkbox"/> Leaning to right <input checked="" type="checkbox"/> Sitting upright <input type="checkbox"/> Unknown  Indicate all letters that apply and describe if other than above
Describe feet and hands/arms location just prior to impact (indicate all that apply)  <u>FEET</u> A) On floor or foot controls B) One or both on dash C) One or both on seat D) Other (specify) E) Unknown  <u>HANDS / ARMS</u> F) Both hands on steering wheel G) One on wheel, other hand resting or adjusting a control (specify hand on wheel and control involved) H) Dialing a cellular phone (specify location and type of phone) I) Holding a cellular phone (specify location and type of phone) J) Bracing with one or both hands K) On lap L) One or both out of window (specify) M) Other (specify) N) Unknown	Indicate all letters that apply and further describe as needed  (A) Both on floor (B) or BRAKE (L) on floor F	Indicate all letters that apply and further describe as needed  (A) Both on floor  UNK	Indicate all letters that apply and further describe as needed  (A) Both on floor  UNK

Describe any additional information here:

OCCUPANT DATA CONTINUED ON NEXT PAGE

## OCCUPANT DATA QUESTIONS (continued)

	DRIVER	OCCUPANT # 2	OCCUPANT # 3
Was your / their back up against the seat back?	<input type="checkbox"/> No (describe) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No (describe) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No (describe) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown
Does this seat position have an adjustable seat track, if so where was the seat located prior to impact?	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Seat all the way forward <input checked="" type="checkbox"/> Between forward and middle <input type="checkbox"/> At middle position <input type="checkbox"/> Between middle and rear position <input type="checkbox"/> Seat all the way rearward <input type="checkbox"/> Unknown	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Seat all the way forward <input type="checkbox"/> Between forward and middle <input checked="" type="checkbox"/> At middle position <input type="checkbox"/> Between middle and rear position <input type="checkbox"/> Seat all the way rearward <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Not adjustable <input type="checkbox"/> Seat all the way forward <input type="checkbox"/> Between forward and middle <input type="checkbox"/> At middle position <input type="checkbox"/> Between middle and rear position <input type="checkbox"/> Seat all the way rearward <input type="checkbox"/> Unknown
Does this seat position have an adjustable seat back, if so where was the seat back located prior to impact?	<input type="checkbox"/> Not adjustable <input checked="" type="checkbox"/> Completely upright <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely reclined	<input type="checkbox"/> Not adjustable <input checked="" type="checkbox"/> Completely upright <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely reclined	<input checked="" type="checkbox"/> Not adjustable <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely reclined
If this seat position has an adjustable seat back, where was the seat back located after impact?	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Did not move (retained original position) <input type="checkbox"/> Completely reclined <input checked="" type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly forward of upright <input type="checkbox"/> Completely forward <input type="checkbox"/> Unknown	<input type="checkbox"/> Not adjustable <input checked="" type="checkbox"/> Did not move (retained original position) <input type="checkbox"/> Completely reclined <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly forward of upright <input type="checkbox"/> Completely forward <input type="checkbox"/> Unknown	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Did not move (retained original position) <input type="checkbox"/> Completely reclined <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly forward of upright <input type="checkbox"/> Completely forward <input type="checkbox"/> Unknown

Did this vehicle have a cellular phone in it during the crash?

☒ No☐ Yes - describe type: \_\_\_\_\_  
(e.g., portable, mounted in vehicle, flip phone, etc.)☐ Unknown*(Note to researcher: try to determine any driver distractions without implying fault)*

Was the driver doing any of the following? (check all that apply - and specify)

- ☐ Talking to or listening to another occupant (specify):  
☐ Was there a moving object in vehicle (specify):  
☐ Talking or listening on a cellular phone (specify):  
☐ Dialing a cellular phone (specify):  
☐ Adjusting climate control (specify):  
☐ Adjusting radio, CD or cassette player (specify):  
☐ Using other device or object in vehicle (specify):  
☐ Sleep, / asleep (specify):  
☐ Distracted by outside person, object, or event (specify):  
☐ Eating or drinking (specify):  
☐ Smoking related (specify):  
☐ Other (specify):  
☐ Unknown

Describe any additional information here:

66-G

## RESTRAINT INFORMATION

	DRIVER	OCCUPANT # <u>2</u>	OCCUPANT # <u>3</u>
Describe the seat belt available for the seat position  NOTE: If a belt is not available for a seat position – describe if removed or not functional.	<input type="checkbox"/> Unknown <input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input checked="" type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Not available * * Describe:	<input type="checkbox"/> Unknown <input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input checked="" type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Not available * * Describe:	<input type="checkbox"/> Unknown <input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input checked="" type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Not available * * Describe:
Do any of the belts have a motorized track for this seat?	<input type="checkbox"/> Unknown <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", were they working properly? <input type="checkbox"/> Yes <input type="checkbox"/> No (describe):	<input type="checkbox"/> Unknown <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", were they working properly? <input type="checkbox"/> Yes <input type="checkbox"/> No (describe):	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", were they working properly? <input type="checkbox"/> Yes <input type="checkbox"/> No (describe):
Do any of the belts attach to the door such that when the door is opened the belt travels with the door?	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes * * If "Yes", does it cross: <input type="checkbox"/> Chest <input checked="" type="checkbox"/> Lap <input checked="" type="checkbox"/> Both	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes * * If "Yes", does it cross: <input type="checkbox"/> Chest <input type="checkbox"/> Lap <input checked="" type="checkbox"/> Both	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", does it cross: <input type="checkbox"/> Chest <input type="checkbox"/> Lap <input type="checkbox"/> Both
Were you [and other occupant(s)] wearing a seat belt during the accident?	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Unknown

## SKIP THE FOLLOWING IF NO SEAT BELT WAS WORN

What type of belt were you [and other occupant(s)] wearing?	<input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input checked="" type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Unknown	<input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input checked="" type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Unknown	<input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input checked="" type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Unknown
How was the lap belt situated?	<input type="checkbox"/> Over lap <input type="checkbox"/> Across stomach <input type="checkbox"/> Other (specify): <input type="checkbox"/> Unknown	<input type="checkbox"/> Over lap <input type="checkbox"/> Across stomach <input type="checkbox"/> Other (specify): <input type="checkbox"/> Unknown	<input type="checkbox"/> Over lap <input type="checkbox"/> Across stomach <input type="checkbox"/> Other (specify): <input type="checkbox"/> Unknown
How was the shoulder belt situated?	<input type="checkbox"/> Over shoulder <input type="checkbox"/> Under the arm <input type="checkbox"/> Behind back <input type="checkbox"/> Behind seat <input type="checkbox"/> Other (specify): <input type="checkbox"/> Unknown	<input type="checkbox"/> Over shoulder <input type="checkbox"/> Under the arm <input type="checkbox"/> Behind back <input type="checkbox"/> Behind seat <input type="checkbox"/> Other (specify): <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Over shoulder <input type="checkbox"/> Under the arm <input type="checkbox"/> Behind back <input type="checkbox"/> Behind seat <input type="checkbox"/> Other (specify): <input type="checkbox"/> Unknown

Describe any breaks, tears, or failures to any of the seat belts:



## EJECTION, ENTRAPMENT, MOBILITY INFORMATION

	DRIVER	OCCUPANT # <u>2</u>	OCCUPANT # <u>3</u>
Was any part of your body thrown outside the vehicle during the crash?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * <input type="checkbox"/> Unknown * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * <input type="checkbox"/> Unknown * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * <input type="checkbox"/> Unknown * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.
Was anyone pinned in the vehicle?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes ___ physically pinned ___ jammed doors ___ fire, etc. <input type="checkbox"/> Unknown Detail any entrapment	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes ___ physically pinned ___ jammed doors ___ fire, etc. <input type="checkbox"/> Unknown Detail any entrapment	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes ___ physically pinned ___ jammed doors ___ fire, etc. <input type="checkbox"/> Unknown Detail any entrapment
How did you [and other occupant(s)] exit the vehicle?	<input type="checkbox"/> Fatal before removed <input type="checkbox"/> Removed while unconscious or disoriented <input type="checkbox"/> Removed due to injuries <input type="checkbox"/> Exited with some assistance <input checked="" type="checkbox"/> Exited under own power <input type="checkbox"/> Fully ejected <input type="checkbox"/> Unknown	<input type="checkbox"/> Fatal before removed <input type="checkbox"/> Removed while unconscious or disoriented <input type="checkbox"/> Removed due to injuries <input type="checkbox"/> Exited with some assistance <input checked="" type="checkbox"/> Exited under own power <input type="checkbox"/> Fully ejected <input type="checkbox"/> Unknown	<input type="checkbox"/> Fatal before removed <input type="checkbox"/> Removed while unconscious or disoriented <input type="checkbox"/> Removed due to injuries <input checked="" type="checkbox"/> Exited with some assistance <input type="checkbox"/> Exited under own power <input type="checkbox"/> Fully ejected <input type="checkbox"/> Unknown

Further describe any ejection, entrapment, or mobility information here:

## AIR BAG INFORMATION

WAS THIS VEHICLE EVER EQUIPPED WITH AN AIR BAG?

☒ YES (IF "YES" COMPLETE THIS SECTION)☐ NO ☐ UNKNOWN (IF "NO" OR "UNKNOWN" SKIP THIS SECTION)

	"OTHER" AIR BAG SPECIFY: _____ OCCUPANT # <u>1</u>	"OTHER" AIR BAG SPECIFY: _____ OCCUPANT # _____	"OTHER" AIR BAG SPECIFY: _____ OCCUPANT # _____
Had this vehicle been in any previous crashes?  <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES - continue to right <input type="checkbox"/> UNKNOWN - go to box below	<input type="checkbox"/> Prior crash <u>without</u> deployment <input type="checkbox"/> One prior crash <u>with</u> deployment <input type="checkbox"/> > 1, <u>with</u> at least one deployment <input type="checkbox"/> Previous accident(s) unknown if deployed  <u>IF PRIOR DEPLOYMENT</u> <input type="checkbox"/> CHECK IF <u>NOT</u> REINSTALLED	<input type="checkbox"/> Prior crash <u>without</u> deployment <input type="checkbox"/> One prior crash <u>with</u> deployment <input type="checkbox"/> > 1, <u>with</u> at least one deployment <input type="checkbox"/> Previous accident(s) unknown if deployed  <u>IF PRIOR DEPLOYMENT</u> <input type="checkbox"/> CHECK IF <u>NOT</u> REINSTALLED	<input type="checkbox"/> Prior crash <u>without</u> deployment <input type="checkbox"/> One prior crash <u>with</u> deployment <input type="checkbox"/> > 1, <u>with</u> at least one deployment <input type="checkbox"/> Previous accident(s) unknown if deployed  <u>IF PRIOR DEPLOYMENT</u> <input type="checkbox"/> CHECK IF <u>NOT</u> REINSTALLED
Type of air bag?	<input type="checkbox"/> Original equipment <input type="checkbox"/> Retrofitted <input type="checkbox"/> Replacement <input type="checkbox"/> Unknown	<input type="checkbox"/> Original equipment <input type="checkbox"/> Retrofitted <input type="checkbox"/> Replacement <input type="checkbox"/> Unknown	<input type="checkbox"/> Original equipment <input type="checkbox"/> Retrofitted <input type="checkbox"/> Replacement <input type="checkbox"/> Unknown
Had any prior maintenance / service been performed on the air bag system?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify: _____	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify: _____	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify: _____
Did the air bag inflate during this crash?	<input type="checkbox"/> Yes <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> No  If "NO" was the wiring disconnected prior to the crash? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unk	<input type="checkbox"/> Yes <input type="checkbox"/> Unknown <input type="checkbox"/> No  If "NO" was the wiring disconnected prior to the crash? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	<input type="checkbox"/> Yes <input type="checkbox"/> Unknown <input type="checkbox"/> No  If "NO" was the wiring disconnected prior to the crash? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk
Was the person in this position wearing any type of eye-wear? (Eyeglasses, sunglasses, contact lenses)	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify: _____	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify: _____	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify: _____
Was the air bag in this position contacted by another occupant?	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify: _____	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify: _____	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify: _____

Describe any additional information here:

## CHILD SAFETY SEAT INFORMATION

WAS THERE A PERSON IN A CHILD SAFETY SEAT IN THIS VEHICLE?

☐ YES (IF "YES" COMPLETE THIS SECTION)☒ NO ☐ UNKNOWN (IF "NO" OR "UNKNOWN" SKIP THIS SECTION)

	DRIVER	OCCUPANT # ____	OCCUPANT # ____
Manufacturer and model of the safety seat?			
Type of safety seat?		<input type="checkbox"/> Infant <input type="checkbox"/> Toddler <input type="checkbox"/> Convertible <input type="checkbox"/> Booster <input type="checkbox"/> Integral <input type="checkbox"/> Other Specify: _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Infant <input type="checkbox"/> Toddler <input type="checkbox"/> Convertible <input type="checkbox"/> Booster <input type="checkbox"/> Integral <input type="checkbox"/> Other Specify: _____ <input type="checkbox"/> Unknown
What direction was it facing prior to the crash?		<input type="checkbox"/> Front <input type="checkbox"/> Rearward <input type="checkbox"/> Unknown	<input type="checkbox"/> Front <input type="checkbox"/> Rearward <input type="checkbox"/> Unknown
Was a seat belt used to hold the seat in place?		<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown
How was the seat belt secured to the child seat?		<input type="checkbox"/> Looped through designated rear framing studs <input type="checkbox"/> Looped through arm rest slots <input type="checkbox"/> Belt across safety shield <input type="checkbox"/> Looped through rear frame outside the designated framing struts <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Looped through designated rear framing studs <input type="checkbox"/> Looped through arm rest slots <input type="checkbox"/> Belt across safety shield <input type="checkbox"/> Looped through rear frame outside the designated framing struts <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown
What was the safety seat equipped with at time of purchase?		<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> Unknown	<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> Unknown
Were any of these added after they owned the safety seat?		<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> None <input type="checkbox"/> Unknown	<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> None <input type="checkbox"/> Unknown

Describe any additional information here:

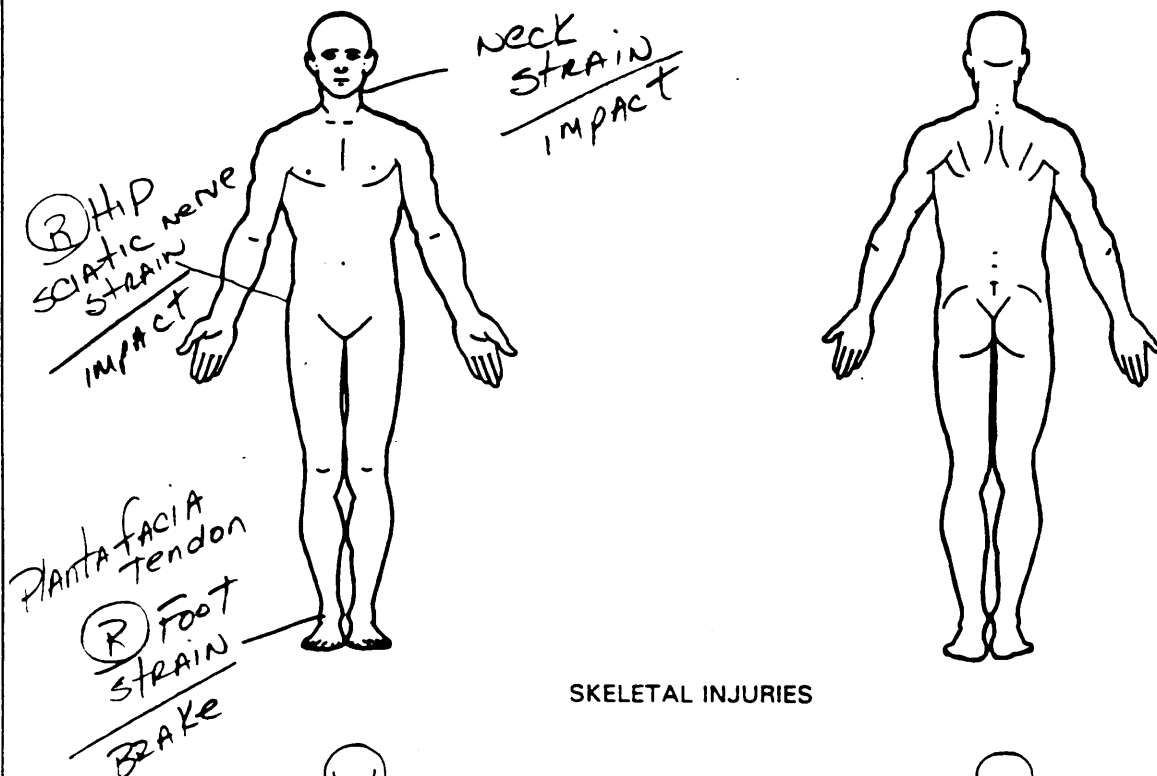
INJURY INFORMATION			
	DRIVER	OCCUPANT # <u>2</u>	OCCUPANT # <u>3</u>
Were you (or any other occupants) injured? > If "YES" go to manikin page and record injuries in detail > If "NO" ask next questions	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown
Did you (or any other occupants) receive any of the following: (If any injuries are checked, go to the manikin page and record location, lesion, and source)	<input type="checkbox"/> Cuts <input type="checkbox"/> Abrasions <input type="checkbox"/> Bruises <input type="checkbox"/> Broken bones <input type="checkbox"/> Head, skull, brain <input type="checkbox"/> Internal injury <input checked="" type="checkbox"/> Sprains, strains <input type="checkbox"/> Other (specify):	<input type="checkbox"/> Cuts <input type="checkbox"/> Abrasions <input type="checkbox"/> Bruises <input type="checkbox"/> Broken bones <input type="checkbox"/> Head, skull, brain <input type="checkbox"/> Internal injury <input type="checkbox"/> Sprains, strains <input type="checkbox"/> Other (specify):	<input type="checkbox"/> Cuts <input type="checkbox"/> Abrasions <input type="checkbox"/> Bruises <input type="checkbox"/> Broken bones <input type="checkbox"/> Head, skull, brain <input checked="" type="checkbox"/> Internal injury <input checked="" type="checkbox"/> Sprains, strains <input type="checkbox"/> Other (specify):
IF ANY OF THE ABOVE ARE CHECKED, GO TO THE MANIKIN PAGE(S) AND RECORD THE LOCATION, LESION, AND SOURCE OF THE INJURY.			
Did you (or any other occupants) receive any medical treatment? (check all that apply)	<input checked="" type="checkbox"/> Hospital <input type="checkbox"/> Medical clinic <input type="checkbox"/> Paramedics at scene <input type="checkbox"/> Doctor's office <input type="checkbox"/> Treated by self <input type="checkbox"/> Unknown	<input type="checkbox"/> Hospital <input type="checkbox"/> Medical clinic <input type="checkbox"/> Paramedics at scene <input type="checkbox"/> Doctor's office <input type="checkbox"/> Treated by self <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Hospital <input type="checkbox"/> Medical clinic <input type="checkbox"/> Paramedics at scene <input type="checkbox"/> Doctor's office <input type="checkbox"/> Treated by self <input type="checkbox"/> Unknown
Were you (or any other occupants) hospitalized?	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes - number of days <u>1</u> <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - number of days <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - number of days <input type="checkbox"/> Unknown
Were you (or any other occupants) treated and released from the emergency room?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown
Name of medical treatment facility?	[REDACTED]		[REDACTED]
Have you (or any other occupants) received any follow-up treatment?	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes - describe: [REDACTED] <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes - describe: _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes - describe: _____ <input type="checkbox"/> Unknown
Have you (or any other occupants) lost any days from work or school (college) due to the crash?	<input type="checkbox"/> No <input type="checkbox"/> Not working prior to crash <input checked="" type="checkbox"/> Yes - number of days <u>5</u> <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Not working prior to crash <input checked="" type="checkbox"/> Yes - number of days <u>2</u> <input type="checkbox"/> Unknown	<input type="checkbox"/> No <u>school</u> <input type="checkbox"/> Not working prior to crash <input checked="" type="checkbox"/> Yes - number of days <u>13</u> <input type="checkbox"/> Unknown
IF REQUIRED: Will you sign a medical release? * If not an in-person interview, make appointment to have release signed	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes* <input type="checkbox"/> Unknown DATE: _____ TIME: _____ PLACE: _____	<input type="checkbox"/> No <input type="checkbox"/> Yes* <input type="checkbox"/> Unknown DATE: _____ TIME: _____ PLACE: _____	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes* <input type="checkbox"/> Unknown DATE: _____ TIME: _____ PLACE: _____

PSU Number 10 Case Number-Stratum 9505 Vehicle Number 02 Occupant Number 01

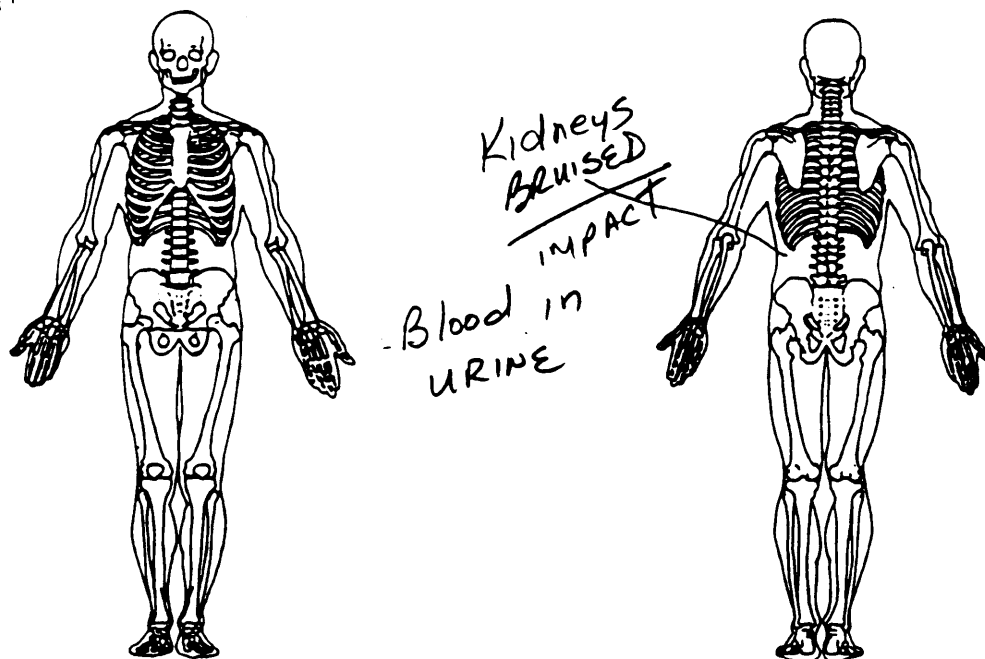
## INJURY DATA FROM INTERVIEWEE(S)

Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s): DRIVERS  
husband

## SOFT TISSUE/INTERNAL INJURIES



## SKELETAL INJURIES



The space provided on the back of this page may be used to further detail injuries noted by the interviewee(s).

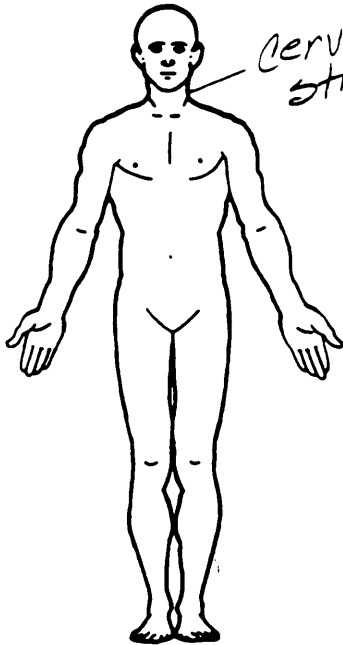
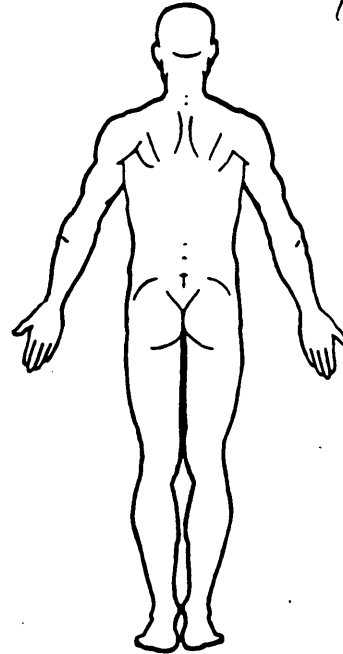
PSU Number 10 Case Number—Stratum 9505 Vehicle Number 02 Occupant Number 02

## INJURY DATA FROM INTERVIEWEE(S)

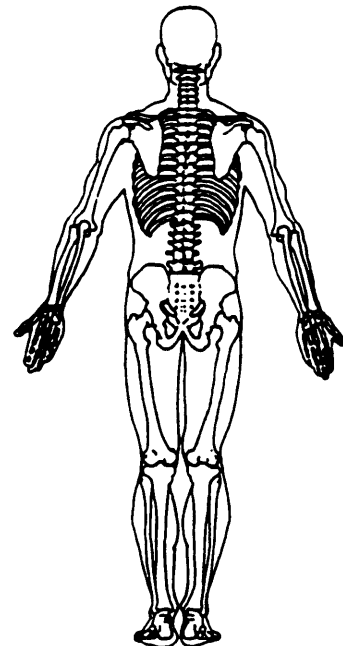
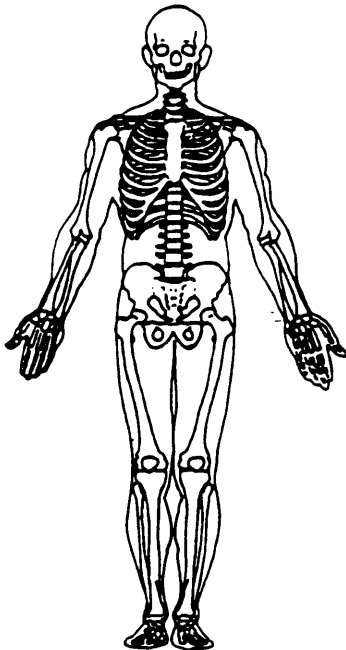
Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s):

DRIVERSHusband /Father of  
this occup

## SOFT TISSUE/INTERNAL INJURIES

SOREslight  
memory loss

## SKELETAL INJURIES



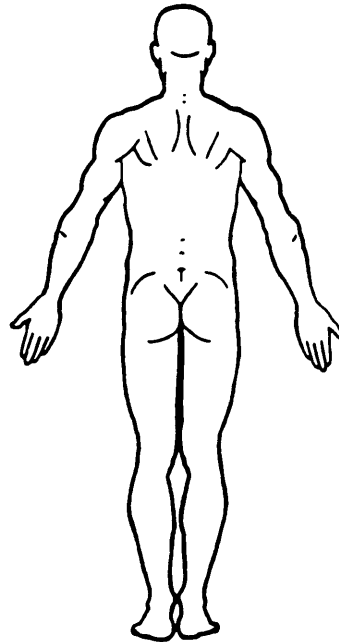
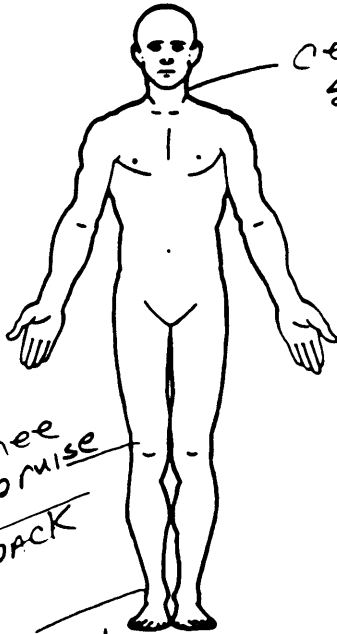
The space provided on the back of this page may be used to further detail injuries noted by the interviewee(s).

PSU Number 10 Case Number-Stratum 9505 Vehicle Number 02 Occupant Number 03

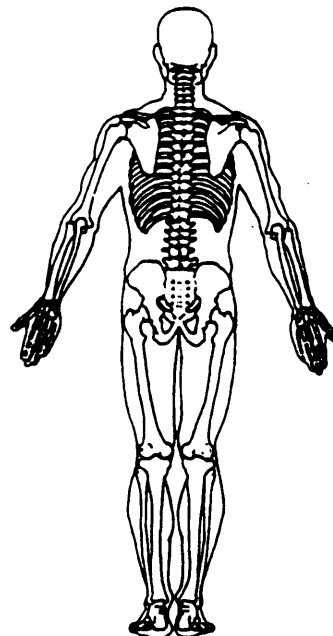
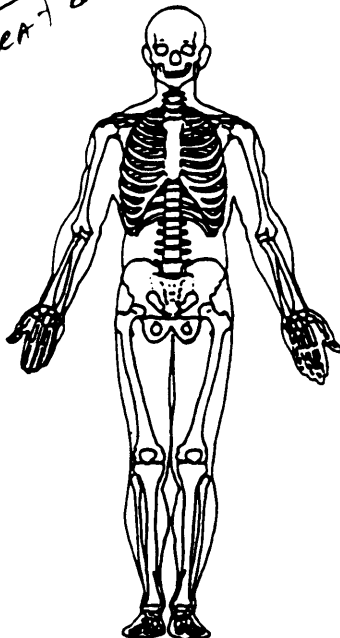
## INJURY DATA FROM INTERVIEWEE(S)

Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s): DRIVERSHusbandFather of  
this occup.

## SOFT TISSUE/INTERNAL INJURIES



## SKELETAL INJURIES



The space provided on the back of this page may be used to further detail injuries noted by the interviewee(s).



## INTERVIEW FORM SUPPLEMENT

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number <u>10</u>	Interviewee(s) Role or Name(s): <u>DRIVER &amp; Father of this occup.</u>
2. Case Number - Stratum <u>9505</u>	
3. Vehicle Number <u>02</u>	

### OCCUPANT DATA QUESTIONS

	OCCUPANT # <u>7</u>	OCCUPANT # _____	OCCUPANT # _____
Where was this person sitting in the vehicle?  Front Left (FL)      Second Left (2L) Front Middle (FM)    Second Middle (2M) Front Right (FR)     Second Right (2R)  Third Left (3L)      Other: Third Middle (3M)    (SPECIFY in block) Third Right (3R)	<u>2R</u>		
What is the Sex, Height, Weight, and Age of each occupant?	<input checked="" type="checkbox"/> M <input type="checkbox"/> F - Not pregnant <input type="checkbox"/> F - Pregnant - # of months _____ <input type="checkbox"/> F - Unk. if pregnant  HEIGHT: <u>5'8"</u> WEIGHT: <u>120</u> AGE: <u>13</u>	<input type="checkbox"/> M <input type="checkbox"/> F - Not pregnant <input type="checkbox"/> F - Pregnant - # of months _____ <input type="checkbox"/> F - Unk. if pregnant  HEIGHT: _____ WEIGHT: _____ AGE: _____	<input type="checkbox"/> M <input type="checkbox"/> F - Not pregnant <input type="checkbox"/> F - Pregnant - # of months _____ <input type="checkbox"/> F - Unk. if pregnant  HEIGHT: _____ WEIGHT: _____ AGE: _____
Describe how occupant was seated  A) Kneeling or standing on seat B) Lying on or across seat C) Kneeling, standing or sitting in front of seat D) Sitting sideways, turned to side or back E) Sitting on console F) Lying back in reclined position G) Other (specify) H) Unknown	<input type="checkbox"/> Leaning to left <input type="checkbox"/> Leaning to right <input checked="" type="checkbox"/> Sitting upright <input type="checkbox"/> Unknown  Indicate all letters that apply and describe if other than above	<input type="checkbox"/> Leaning to left <input type="checkbox"/> Leaning to right <input type="checkbox"/> Sitting upright <input type="checkbox"/> Unknown  Indicate all letters that apply and describe if other than above	<input type="checkbox"/> Leaning to left <input type="checkbox"/> Leaning to right <input type="checkbox"/> Sitting upright <input type="checkbox"/> Unknown  Indicate all letters that apply and describe if other than above
Describe any additional information here:			



## OCCUPANT DATA QUESTIONS (continued)

	OCCUPANT # <u>4</u>	OCCUPANT # <u>    </u>	OCCUPANT # <u>    </u>
<p>Describe feet and hands/arms location just prior to impact (indicate all that apply)</p> <p style="text-align: center;"><u>FEET</u></p> <p>A) On floor or foot controls  B) One or both on dash  C) One or both on seat  D) Other (specify)  E) Unknown</p> <p style="text-align: center;"><u>HANDS / ARMS</u></p> <p>F) Both hands on steering wheel  G) One on wheel, other hand resting or adjusting a control (specify hand on wheel and control involved)  H) Dialing a cellular phone (specify location and type of phone)  I) Holding a cellular phone (specify location and type of phone)  J) Bracing with one or both hands  K) On lap  L) One or both out of window (specify)  M) Other (specify)  N) Unknown</p>	<p>Indicate all letters that apply and further describe as needed</p> <p style="text-align: center;">Both on floor  (A)</p> <p style="text-align: center;">UNK</p>	<p>Indicate all letters that apply and further describe as needed</p>	<p>Indicate all letters that apply and further describe as needed</p>
Was your / their back up against the seat back?	<input checked="" type="checkbox"/> No (describe) <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No (describe) <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No (describe) <input type="checkbox"/> Yes <input type="checkbox"/> Unknown
Does this seat position have an adjustable seat <i>track</i> , if so where was the seat located prior to impact?	<input checked="" type="checkbox"/> Not adjustable <input type="checkbox"/> Seat all the way forward <input type="checkbox"/> Between forward and middle <input type="checkbox"/> At middle position <input type="checkbox"/> Between middle and rear position <input type="checkbox"/> Seat all the way rearward <input type="checkbox"/> Unknown	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Seat all the way forward <input type="checkbox"/> Between forward and middle <input type="checkbox"/> At middle position <input type="checkbox"/> Between middle and rear position <input type="checkbox"/> Seat all the way rearward <input type="checkbox"/> Unknown	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Seat all the way forward <input type="checkbox"/> Between forward and middle <input type="checkbox"/> At middle position <input type="checkbox"/> Between middle and rear position <input type="checkbox"/> Seat all the way rearward <input type="checkbox"/> Unknown
Does this seat position have an adjustable seat <i>back</i> , if so where was the seat <i>back</i> located prior to impact?	<input checked="" type="checkbox"/> Not adjustable <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely reclined	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely reclined	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely reclined
If this seat position has an adjustable seat <i>back</i> , where was the seat <i>back</i> located after impact?	<input checked="" type="checkbox"/> Not adjustable <input type="checkbox"/> Did not move (retained original position) <input type="checkbox"/> Completely reclined <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly forward of upright <input type="checkbox"/> Completely forward <input type="checkbox"/> Unknown	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Did not move (retained original position) <input type="checkbox"/> Completely reclined <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly forward of upright <input type="checkbox"/> Completely forward <input type="checkbox"/> Unknown	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Did not move (retained original position) <input type="checkbox"/> Completely reclined <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly forward of upright <input type="checkbox"/> Completely forward <input type="checkbox"/> Unknown

RESTRAINT INFORMATION			
	OCCUPANT # <u>4</u>	OCCUPANT # <u>    </u>	OCCUPANT # <u>    </u>
Describe the seat belt available for the seat position  NOTE: If a belt is not available for a seat position -- describe if removed or not functional.	<input type="checkbox"/> Unknown <input type="checkbox"/> Lap belt <input checked="" type="checkbox"/> Shoulder belt <input type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Not available * * Describe:	<input type="checkbox"/> Unknown <input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Not available * * Describe:	<input type="checkbox"/> Unknown <input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Not available * * Describe:
<b>** SKIP THESE QUESTIONS FOR REAR SEATED OCCUPANTS **</b>  Do any of the belts move along a motorized track for this seat?	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes *  * If "Yes", were they working properly?  <input type="checkbox"/> Yes <input type="checkbox"/> No (describe):	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes *  * If "Yes", were they working properly?  <input type="checkbox"/> Yes <input type="checkbox"/> No (describe):	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes *  * If "Yes", were they working properly?  <input type="checkbox"/> Yes <input type="checkbox"/> No (describe):
Do any of the belts attach to the door such that when the door is opened the belt travels with the door?	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes *  * If "Yes", does it cross: <input type="checkbox"/> Chest <input type="checkbox"/> Lap <input type="checkbox"/> Both	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes *  * If "Yes", does it cross: <input type="checkbox"/> Chest <input type="checkbox"/> Lap <input type="checkbox"/> Both	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes *  * If "Yes", does it cross: <input type="checkbox"/> Chest <input type="checkbox"/> Lap <input type="checkbox"/> Both
Were you [and other occupant(s)] wearing a seat belt during the accident?	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown
<b>SKIP THE FOLLOWING IF NO SEAT BELT WAS WORN</b>			
What type of belt were you [and other occupant(s)] wearing?	<input type="checkbox"/> Lap belt <input checked="" type="checkbox"/> Shoulder belt <input type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Unknown	<input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Unknown	<input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Unknown
How was the lap belt situated?	<input type="checkbox"/> Low on lap <input checked="" type="checkbox"/> Across stomach <input type="checkbox"/> Other (specify): <input type="checkbox"/> Unknown	<input type="checkbox"/> Low on lap <input type="checkbox"/> Across stomach <input type="checkbox"/> Other (specify): <input type="checkbox"/> Unknown	<input type="checkbox"/> Low on lap <input type="checkbox"/> Across stomach <input type="checkbox"/> Other (specify): <input type="checkbox"/> Unknown
How was the shoulder belt situated?	<input checked="" type="checkbox"/> Over shoulder <input checked="" type="checkbox"/> Under the arm <input type="checkbox"/> Behind back <input type="checkbox"/> Behind seat <input type="checkbox"/> Other (specify):	<input type="checkbox"/> Over shoulder <input type="checkbox"/> Under the arm <input type="checkbox"/> Behind back <input type="checkbox"/> Behind seat <input type="checkbox"/> Other (specify):	<input type="checkbox"/> Over shoulder <input type="checkbox"/> Under the arm <input type="checkbox"/> Behind back <input type="checkbox"/> Behind seat <input type="checkbox"/> Other (specify):
Describe any breaks, tears, or failures to any of the seat belts:			

## EJECTION, ENTRAPMENT, MOBILITY INFORMATION

	OCCUPANT # <u>4</u>	OCCUPANT # <u>    </u>	OCCUPANT # <u>    </u>
Was any part of your body thrown outside the vehicle during the crash?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * <input type="checkbox"/> Unknown  * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	<input type="checkbox"/> No <input type="checkbox"/> Yes * <input type="checkbox"/> Unknown  * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	<input type="checkbox"/> No <input type="checkbox"/> Yes * <input type="checkbox"/> Unknown  * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.
Was anyone pinned in the vehicle?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes ___ physically pinned ___ jammed doors ___ fire, etc.  <input type="checkbox"/> Unknown Detail any entrapment	<input type="checkbox"/> No <input type="checkbox"/> Yes ___ physically pinned ___ jammed doors ___ fire, etc.  <input type="checkbox"/> Unknown Detail any entrapment	<input type="checkbox"/> No <input type="checkbox"/> Yes ___ physically pinned ___ jammed doors ___ fire, etc.  <input type="checkbox"/> Unknown Detail any entrapment
How did you [and other occupant(s)] exit the vehicle?	<input type="checkbox"/> Fatal before removed <input type="checkbox"/> Removed while unconscious or disoriented <input type="checkbox"/> Removed due to injuries <input type="checkbox"/> Exited with some assistance <input checked="" type="checkbox"/> Exited under own power <input type="checkbox"/> Fully ejected <input type="checkbox"/> Unknown	<input type="checkbox"/> Fatal before removed <input type="checkbox"/> Removed while unconscious or disoriented <input type="checkbox"/> Removed due to injuries <input type="checkbox"/> Exited with some assistance <input type="checkbox"/> Exited under own power <input type="checkbox"/> Fully ejected <input type="checkbox"/> Unknown	<input type="checkbox"/> Fatal before removed <input type="checkbox"/> Removed while unconscious or disoriented <input type="checkbox"/> Removed due to injuries <input type="checkbox"/> Exited with some assistance <input type="checkbox"/> Exited under own power <input type="checkbox"/> Fully ejected <input type="checkbox"/> Unknown

Further describe any ejection, entrapment, or mobility information here:

## AIR BAG INFORMATION

## WAS THIS VEHICLE EVER EQUIPPED WITH AN AIR BAG?

☐ YES (IF "YES" COMPLETE THIS SECTION)

☒ NO ☐ UNKNOWN (IF "NO" OR "UNKNOWN" SKIP THIS SECTION)

	"OTHER" AIR BAG SPECIFY: _____ OCCUPANT # _____	"OTHER" AIR BAG SPECIFY: _____ OCCUPANT # _____	"OTHER" AIR BAG SPECIFY: _____ OCCUPANT # _____
Had this vehicle been in any previous crashes?  <input type="checkbox"/> NO <input type="checkbox"/> YES - continue to right <input type="checkbox"/> UNKNOWN - go to box below	<input type="checkbox"/> Prior crash <u>without</u> deployment <input type="checkbox"/> One prior crash <u>with</u> deployment <input type="checkbox"/> > 1, <u>with</u> at least one deployment <input type="checkbox"/> Previous accident(s) unknown if deployed  <u>IF PRIOR DEPLOYMENT</u> <input type="checkbox"/> CHECK IF <u>NOT</u> REINSTALLED	<input type="checkbox"/> Prior crash <u>without</u> deployment <input type="checkbox"/> One prior crash <u>with</u> deployment <input type="checkbox"/> > 1, <u>with</u> at least one deployment <input type="checkbox"/> Previous accident(s) unknown if deployed  <u>IF PRIOR DEPLOYMENT</u> <input type="checkbox"/> CHECK IF <u>NOT</u> REINSTALLED	<input type="checkbox"/> Prior crash <u>without</u> deployment <input type="checkbox"/> One prior crash <u>with</u> deployment <input type="checkbox"/> > 1, <u>with</u> at least one deployment <input type="checkbox"/> Previous accident(s) unknown if deployed  <u>IF PRIOR DEPLOYMENT</u> <input type="checkbox"/> CHECK IF <u>NOT</u> REINSTALLED
Type of air bag?	<input type="checkbox"/> Original equipment <input type="checkbox"/> Retrofitted <input type="checkbox"/> Replacement <input type="checkbox"/> Unknown	<input type="checkbox"/> Original equipment <input type="checkbox"/> Retrofitted <input type="checkbox"/> Replacement <input type="checkbox"/> Unknown	<input type="checkbox"/> Original equipment <input type="checkbox"/> Retrofitted <input type="checkbox"/> Replacement <input type="checkbox"/> Unknown
Had any prior maintenance / service been performed on the air bag system?	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:
Did the air bag inflate during this crash?	<input type="checkbox"/> Yes <input type="checkbox"/> Unknown <input type="checkbox"/> No  If "NO" was the wiring disconnected prior to the crash?  <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	<input type="checkbox"/> Yes <input type="checkbox"/> Unknown <input type="checkbox"/> No  If "NO" was the wiring disconnected prior to the crash?  <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	<input type="checkbox"/> Yes <input type="checkbox"/> Unknown <input type="checkbox"/> No  If "NO" was the wiring disconnected prior to the crash?  <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk
Was the person in this position wearing any type of eye-wear? (Eyeglasses, sunglasses, contact lenses)	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:
Was the air bag in this position contacted by another occupant?	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:

Describe any additional information here:

## CHILD SAFETY SEAT INFORMATION

WAS THERE A PERSON IN A CHILD SAFETY SEAT IN THIS VEHICLE?

☐ YES (IF "YES" COMPLETE THIS SECTION)☒ NO ☐ UNKNOWN (IF "NO" OR "UNKNOWN" SKIP THIS SECTION)

	OCCUPANT # ____	OCCUPANT # ____	OCCUPANT # ____
Manufacturer and model of the safety seat?			
Type of safety seat?	<input type="checkbox"/> Infant <input type="checkbox"/> Toddler <input type="checkbox"/> Convertible <input type="checkbox"/> Booster <input type="checkbox"/> Integral <input type="checkbox"/> Other Specify: _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Infant <input type="checkbox"/> Toddler <input type="checkbox"/> Convertible <input type="checkbox"/> Booster <input type="checkbox"/> Integral <input type="checkbox"/> Other Specify: _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Infant <input type="checkbox"/> Toddler <input type="checkbox"/> Convertible <input type="checkbox"/> Booster <input type="checkbox"/> Integral <input type="checkbox"/> Other Specify: _____ <input type="checkbox"/> Unknown
What direction was it facing prior to the crash?	<input type="checkbox"/> Front <input type="checkbox"/> Rearward <input type="checkbox"/> Unknown	<input type="checkbox"/> Front <input type="checkbox"/> Rearward <input type="checkbox"/> Unknown	<input type="checkbox"/> Front <input type="checkbox"/> Rearward <input type="checkbox"/> Unknown
Was a seat belt used to hold the seat in place?	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown
How was the seat belt secured to the child seat?	<input type="checkbox"/> Looped through designated rear framing studs <input type="checkbox"/> Looped through arm rest slots <input type="checkbox"/> Belt across safety shield <input type="checkbox"/> Looped through rear frame outside the designated framing struts <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Looped through designated rear framing studs <input type="checkbox"/> Looped through arm rest slots <input type="checkbox"/> Belt across safety shield <input type="checkbox"/> Looped through rear frame outside the designated framing struts <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Looped through designated rear framing studs <input type="checkbox"/> Looped through arm rest slots <input type="checkbox"/> Belt across safety shield <input type="checkbox"/> Looped through rear frame outside the designated framing struts <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown
What was the safety seat equipped with at time of purchase?	<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> Unknown	<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> Unknown	<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> Unknown
Were any of these added after they owned the safety seat?	<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> None <input type="checkbox"/> Unknown	<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> None <input type="checkbox"/> Unknown	<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> None <input type="checkbox"/> Unknown

Describe any additional information here:

INJURY INFORMATION			
	OCCUPANT # <u>4</u>	OCCUPANT # <u>   </u>	OCCUPANT # <u>   </u>
Were you (or any other occupants) injured? • If "YES" go to manikin page and record injuries in detail • If "NO" ask next questions	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown
Did you (or any other occupants) receive any of the following:  (If any injuries are checked, go to the manikin page and record location, lesion, and source)	<input type="checkbox"/> Cuts <input type="checkbox"/> Abrasions <input type="checkbox"/> Bruises <input type="checkbox"/> Broken bones <input type="checkbox"/> Head, skull, brain <input checked="" type="checkbox"/> Internal injury <input checked="" type="checkbox"/> Sprains, strains <input type="checkbox"/> Other (specify):	<input type="checkbox"/> Cuts <input type="checkbox"/> Abrasions <input type="checkbox"/> Bruises <input type="checkbox"/> Broken bones <input type="checkbox"/> Head, skull, brain <input type="checkbox"/> Internal injury <input type="checkbox"/> Sprains, strains <input type="checkbox"/> Other (specify):	<input type="checkbox"/> Cuts <input type="checkbox"/> Abrasions <input type="checkbox"/> Bruises <input type="checkbox"/> Broken bones <input type="checkbox"/> Head, skull, brain <input type="checkbox"/> Internal injury <input type="checkbox"/> Sprains, strains <input type="checkbox"/> Other (specify):
IF OCCUPANTS SUSTAINED ANY INJURIES, ANY BOXES CHECKED? <input checked="" type="checkbox"/> IF YES, DETAIL INJURY LOCATION, LESION, AND SOURCE ON THE MANIKIN PAGE(S)			
Did you (or any other occupants) receive any medical treatment?  (check all that apply)	<input type="checkbox"/> Hospital <input type="checkbox"/> Medical clinic <input type="checkbox"/> Paramedics at scene <input type="checkbox"/> Doctor's office <input type="checkbox"/> Treated by self <input type="checkbox"/> Unknown	<input type="checkbox"/> Hospital <input type="checkbox"/> Medical clinic <input type="checkbox"/> Paramedics at scene <input type="checkbox"/> Doctor's office <input type="checkbox"/> Treated by self <input type="checkbox"/> Unknown	<input type="checkbox"/> Hospital <input type="checkbox"/> Medical clinic <input type="checkbox"/> Paramedics at scene <input type="checkbox"/> Doctor's office <input type="checkbox"/> Treated by self <input type="checkbox"/> Unknown
Were you (or any other occupants) hospitalized?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - number of days <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes - number of days <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes - number of days <input type="checkbox"/> Unknown
Were you (or any other occupants) treated and released from the emergency room?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown
Name of medical treatment facility?			
Have you (or any other occupants) received any follow-up treatment?	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes - describe: <u>PHYSICAL</u> <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes - describe: _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes - describe: _____ <input type="checkbox"/> Unknown
Have you (or any other occupants) lost any days from work or school (college) due to the crash?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Not working prior to crash <input type="checkbox"/> Yes - number of days <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Not working prior to crash <input type="checkbox"/> Yes - number of days <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Not working prior to crash <input type="checkbox"/> Yes - number of days <input type="checkbox"/> Unknown
IF REQUIRED: Will you sign a medical release?	<input type="checkbox"/> No <input type="checkbox"/> Yes* <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes* <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes* <input type="checkbox"/> Unknown
* If not an in-person interview, make appointment to have release signed	DATE: _____ TIME: _____ PLACE: _____	DATE: _____ TIME: _____ PLACE: _____	DATE: _____ TIME: _____ PLACE: _____

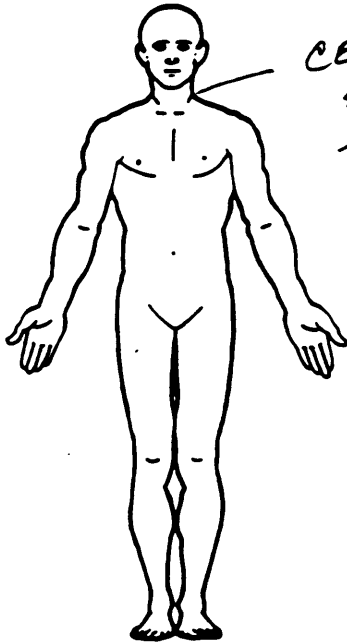
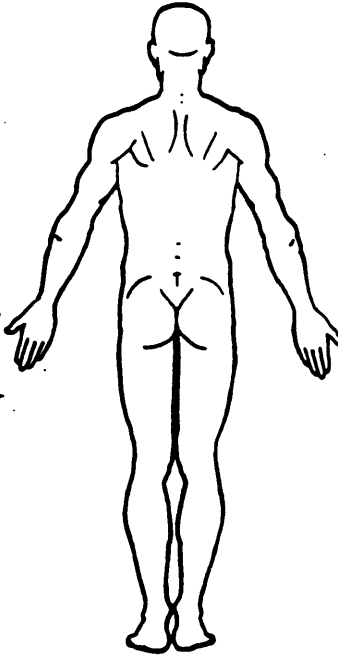
PSU Number 10 Case Number-Stratum 9505 Vehicle Number 02 Occupant Number 04

## INJURY DATA FROM INTERVIEWEE(S)

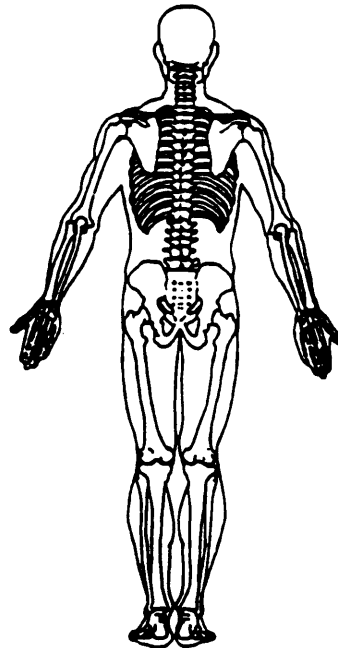
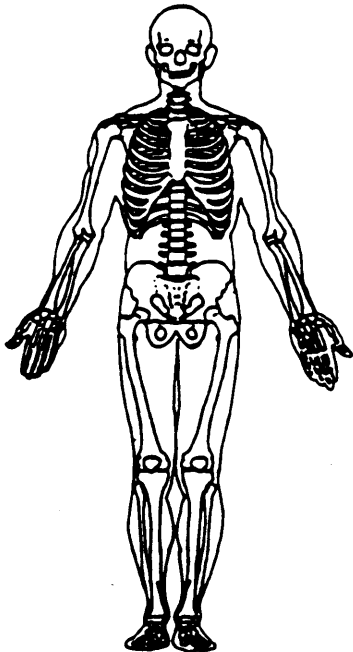
Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s):

DRIVER & Father  
of this occup

## SOFT TISSUE/INTERNAL INJURIES

CERVICAL  
STRAIN  
IMPACTHe is  
still  
experiencing  
some  
discomfort.  
95

## SKELETAL INJURIES



The space provided on the back of this page may be used to further detail injuries noted by the interviewee(s).

**Appendix H:**

**NASS CDS OCCUPANT ASSESSMENT FORM:**

**CASE VEHICLE DRIVER**





## OCCUPANT ASSESSMENT FORM

1. Primary Sampling Unit Number

10

2. Case Number - Stratum

9505

3. Vehicle Number

01

4. Occupant Number

01

### OCCUPANT'S CHARACTERISTICS

5. Occupant's Age

51

Code actual age at time of accident.

(00) Less than one year old (specify by month):

(97) 97 years and older

(99) Unknown

6. Occupant's Sex

2

(1) Male

(2) Female-not reported pregnant

(3) Female-pregnant-1st trimester(1st-3rd month)

(4) Female-pregnant-2nd trimester(4th-6th month)

(5) Female-pregnant-3rd trimester(7th-9th month)

(6) Female-pregnant-term unknown

(9) Unknown

7. Occupant's Height

163

Code actual height to the nearest  
centimeter.

(999) Unknown

64 inches X 2.54 = 163 centimeters

8. Occupant's Weight

067

Code actual weight to the nearest  
kilogram.

(999) Unknown

148 pounds X .4536 = 67 kilograms

9. Occupant's Role

1

(1) Driver

(2) Passenger

(9) Unknown

### OCCUPANT'S SEATING

10. Occupant's Seat Position

11

*Front Seat*

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify):

(15) On or in the lap of another occupant

*Second Seat*

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify):

(25) On or in the lap of another occupant

*Third Seat*

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify):

(35) On or in the lap of another occupant

*Fourth Seat*

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify):

(45) On or in the lap of another occupant

(97) In or on unenclosed area

(98) Other seat (specify):

(99) Unknown

11. Occupant's Posture

9

(0) Normal posture

*Abnormal posture*

(1) Kneeling or standing on seat

(2) Lying on or across seat

(3) Kneeling, standing or sitting in front of seat

(4) Sitting sideways or turned to talk with another  
occupant or to look out a rear window

(5) Sitting on a console

(6) Lying back in a reclined seat position

(7) Bracing with feet or hands on a surface in front  
of seat

(8) Other abnormal posture (specify):

(9) Unknown

**EJECTION/ENTRAPMENT****12. Ejection**

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

0**13. Ejection Area**

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)  
(specify): \_\_\_\_\_
- (9) Unknown

0**14. Ejection Medium**

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): \_\_\_\_\_

- (5) Integral structure
- (8) Other medium (specify): \_\_\_\_\_

- (9) Unknown

0**15. Medium Status (Immediately Prior To Impact)**

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

0**16. Entrapment**

- (0) Not entrapped/exit not inhibited
- (1) Entrapped/pinned - mechanically restrained
- (2) Could not exit vehicle due to jammed doors, fire, etc.  
(specify): \_\_\_\_\_
- (9) Unknown

0**17. Occupant Mobility**

- (0) Occupant fatal before removed from vehicle
- (1) Removed from vehicle while unconscious or disoriented
- (2) Removed from vehicle due to injuries
- (3) Exited vehicle with some assistance
- (4) Exited vehicle under own power
- (5) Occupant fully ejected
- (9) Unknown

1

## BELT SYSTEM FUNCTION

18. Manual (Active) Belt System Availability 4

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

*Integral Belt Partially Destroyed*

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)
- (8) Other belt (specify):

(9) Unknown19. Manual (Active) Belt System Use 00

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify):

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used—type unknown
- (08) Other belt used (specify):

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat—type unknown
- (18) Other belt used with child safety seat (specify):
- (99) Unknown if belt used

20. Proper Use of Manual (Active) Belts 0

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

*Belt Used Improperly*

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of manual belt system (specify):(9) Unknown21. Manual (Active) Belt Failure Modes—During Accident 0

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):

(6) Broken retractor(7) Combination of above (specify):(8) Other manual belt failure (specify):(9) Unknown22. Shoulder Belt Upper Anchorage Adjustment 1

- (0) No shoulder belt
- (1) No upper anchorage adjustment for shoulder belt

*Adjustable shoulder Belt Upper Anchorage*

- (2) In full up position
- (3) In mid position
- (4) In full down position
- (5) Position unknown
- (9) Unknown if position has adjustable upper anchorage adjustment

23. Automatic (Passive) Belt System Availability/Function 0

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

*Non-functional*

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

24. Automatic (Passive) Belt System Use 0

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify):
- (3) Automatic belt use unknown
- (9) Unknown

25. Automatic (Passive) Belt System Type 0

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

26. Proper Use of Automatic (Passive) Belt System 0

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

*Automatic Belt Used Improperly*

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of automatic belt system (specify):(9) Unknown27. Automatic (Passive) Belt Failure Modes During Accident 0

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):

(6) Broken retractor(7) Combination of above (specify):(8) Other automatic belt failure (specify):(9) Unknown

## POLICE REPORTED RESTRAINT USE

28. Police Reported Belt Use 0

- (0) None used  
 (1) Police did not indicate belt use  
 (2) Shoulder belt  
 (3) Lap belt  
 (4) Lap and shoulder belt  
 (5) Belt used, type not specified  
 (6) Child safety seat  
 (7) Automatic belt  
 (8) Other type belt, (specify):  
 (9) Police indicated "unknown"

29. Police Reported Air Bag Availability/Function 2

- (0) No air bag available  
 (1) Police did not indicate air bag availability/function  
 (2) Deployed  
 (3) Not deployed  
 (4) Unknown if deployed  
 (9) Police indicated "unknown"

Check the Primary Source Used In Determining Belt Use.

- [ ] Not equipped/not available/destroyed or rendered inoperative  
 [✓] Vehicle inspection  
 [ ] Official injury data  
 [ ] Driver/occupant interview  
 [ ] Other (specify):  
 [ ] Unknown if belt used

## AIR BAG SYSTEM FUNCTION

30. Frontal Air Bag System Availability/Function (This Occupant Position) 1

- (0) Not equipped/not available  
 (1) Air bag

*Non-functional*

- (2) Air bag disconnected (specify):  
 (3) Air bag not reinstalled  
 (9) Unknown

31. Frontal Air Bag System Deployment (This Occupant Position) 1

- (0) Not equipped/not available  
 (1) Deployed during accident (as a result of impact)  
 (2) Deployed inadvertently just prior to accident  
 (3) Deployed, details unknown  
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)  
 (5) Unknown if deployed  
 (7) Nondeployed  
 (9) Unknown

32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) 0

- (0) Not equipped/not available  
 (1) Air bag

*Non-functional*

- (2) Air bag disconnected (specify):  
 (3) Air bag not reinstalled  
 (9) Unknown

*Specify type of "other" air bag present:*

33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) 0

- (0) Not equipped with an "other" air bag  
 (1) Deployed during accident (as a result of impact)  
 (2) Deployed inadvertently just prior to accident  
 (3) Deployed, details unknown  
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)  
 (5) Unknown if deployed  
 (7) Nondeployed  
 (9) Unknown

34. Are There Indications of Air Bag System Failure? (This Occupant Position) 1

- (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify):  
 (9) Unknown

## FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION

35. Had Vehicle Been in Previous Accident(s)? 1

- (0) Not equipped/not available  
(1) No previous accidents

Yes

- (2) Previous accident(s) without deployment(s)  
(3) One previous accident with deployment  
(4) More than one previous accident with at least one deployment  
(8) Previous accidents, unknown deployment status  
(9) Unknown

36. Type of Air Bag 1

- (0) Not equipped/not available  
(1) Original manufacturer installed system  
(2) Retrofitted air bag  
(3) Replacement air bag  
(8) Unknown type of air bag  
(9) Unknown

37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? 1

- (0) Not equipped/not available  
(1) No prior maintenance  
(2) Yes, prior maintenance (specify): \_\_\_\_\_

(9) Unknown

38. Air Bag Deployment Accident Event Sequence Number 01

- (00) Not equipped/not available  
\_\_\_\_\_ Code the accident event sequence number that initiated the air bag deployment

- (96) Deployed, unknown event  
(97) Not deployed  
(98) Unknown if deployed  
(99) Unknown

39. CDC For Air Bag Deployment Impact 1

- (0) Not equipped/not available  
(1) Highest delta V  
(2) Second highest delta V  
(3) Other non-coded delta V (specify): \_\_\_\_\_

- (6) Deployed, unknown event  
(7) Not deployed  
(8) Unknown if deployed  
(9) Unknown

40. Longitudinal Component of Delta V For Air Bag Deployment Impact +021

- (\_000) Not equipped/not available  
Code the value of the delta V for the impact that initiated the air bag deployment  
(\_996) Deployment, unknown longitudinal Delta V  
(\_997) Not deployed  
(\_998) Unknown if deployed  
(\_999) Unknown

41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? 1

- (0) Not equipped/not available  
(1) No  
(2) Yes  
(3) Deployed, unknown if flap(s) opened at designated tear points  
(7) Not deployed  
(8) Unknown if deployed  
(9) Unknown

42. Were Air Bag Module Cover Flap(s) Damaged? 2

- (0) Not equipped/not available  
(1) No  
(2) Yes (specify): whole flap cover Blew off hub  
(3) Deployed, unknown if air bag module cover flap(s) damaged  
(7) Not deployed  
(8) Unknown if deployed  
(9) Unknown

43. Was There Damage To The Air Bag? 01

- (00) Not equipped/not available  
(01) Not damaged

Yes - Air Bag Damage

- (02) Ruptured  
(03) Cut  
(04) Torn  
(05) Holed  
(06) Burned  
(07) Abraded  
(88) Other damage (specify): \_\_\_\_\_

- (95) Damaged, details unknown  
(96) Deployed, unknown if damaged  
(97) Not deployed  
(98) Unknown if deployed  
(99) Unknown

**FIRST SEAT FRONTAL AIR BAG SYSTEM  
EVALUATION** *continued*

44. Source of Air Bag Damage 01  
 (00) Not equipped/not available  
 (01) Not damaged  
 (02) Object worn by occupant, (specify):  
 (03) Object carried by occupant, (specify):  
 (04) Adaptive/assistive controls, (specify):  
 (05) Fire in vehicle  
 (06) Thermal burns  
 (07) Rescue or emergency efforts  
 (88) Other damage source (specify):  
 (95) Damaged, unknown source  
 (96) Deployed, unknown if damaged  
 (97) Not deployed  
 (98) Unknown if deployed  
 (99) Unknown
45. Was The Air Bag Tethered? 1  
 (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify number of tether straps):  
 (3) Deployed, unknown if tethered  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown
46. Did The Air Bag Have Vent Ports? 2  
 (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify number of vent ports):  
 (3) Deployed, unknown if vent ports present  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown
47. Was the Air Bag in this Occupant's Position Contacted by Another Occupant? 1  
 (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify):  
 (3) Deployed, unknown if other occupant contact to air bag  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown
48. Was This Occupant Wearing Eye-wear? 2  
 (0) Not equipped/not available  
 (1) No  
 (2) Eyeglasses/sunglasses  
 (3) Contact lenses  
 (4) Deployed, unknown if eyewear worn  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

**HEAD RESTRAINT AND SEAT EVALUATION**

49. Head Restraint Type/Damage by Occupant at This Occupant Position 3  
 (0) No head restraints  
 (1) Integral—no damage  
 (2) Integral—damaged during accident  
 (3) Adjustable—no damage  
 (4) Adjustable—damaged during accident  
 (5) Add-on—no damage  
 (6) Add-on—damaged during accident  
 (8) Other (specify):  
 (9) Unknown
50. Seat Type (this Occupant Position) 02  
 (00) Occupant not seated or no seat  
 (01) Bucket  
 (02) Bucket with folding back  
 (03) Bench  
 (04) Bench with separate back cushions  
 (05) Bench with folding back(s)  
 (06) Split bench with separate back cushions  
 (07) Split bench with folding back(s)  
 (08) Pedestal (i.e., column supported)  
 (09) Box mounted seat (i.e., van type)  
 (10) Other seat type (specify):  
 (99) Unknown
51. Seat Orientation (this Occupant Position) L  
 (0) Occupant not seated or no seat  
 (1) Forward facing seat  
 (2) Rear facing seat  
 (3) Side facing seat (inward)  
 (4) Side facing seat (outward)  
 (8) Other (specify):  
 (9) Unknown
52. Seat Track Adjusted Position Prior To Impact 3  
 (0) Occupant not seated or no seat  
 (1) Non-adjustable seat track  
 Adjustable Seat Track  
 (2) Seat at forward most track position  
 (3) Seat between forward most and middle track positions  
 (4) Seat at middle track position  
 (5) Seat between middle and rear most track positions  
 (6) Seat at rear most track position  
 (9) Unknown

HEAD RESTRAINT AND SEAT EVALUATION *continued*53. Seat Back Incline Prior and Post Impact 99

- (00) Occupant not seated or no seat  
 (01) Not adjustable

*Upright prior to impact*

- (11) Moved to completely rearward position  
 (12) Moved to rearward midrange position  
 (13) Moved to slightly rearward position  
 (14) Retained pre-impact position  
 (15) Moved to slightly forward position  
 (16) Moved to forward midrange position  
 (17) Moved to completely forward position

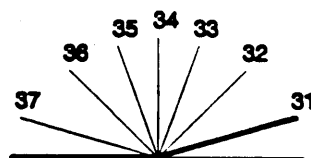
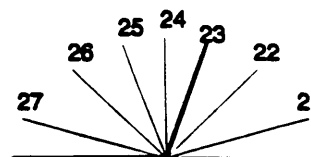
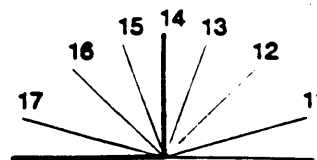
*Slightly reclined prior to impact*

- (21) Moved to completely rearward position  
 (22) Moved to rearward midrange position  
 (23) Retained pre-impact position  
 (24) Moved to upright position  
 (25) Moved to slightly forward position  
 (26) Moved to forward midrange position  
 (27) Moved to completely forward position

*Completely reclined prior to impact*

- (31) Retained pre-impact position  
 (32) Moved to rearward midrange position  
 (33) Moved to slightly rearward position  
 (34) Moved to upright position  
 (35) Moved to slightly forward position  
 (36) Moved to forward midrange position  
 (37) Moved to completely forward position

(99) Unknown

54. Seat Performance (this Occupant Position) +

- (0) Occupant not seated or no seat  
 (1) No seat performance failure(s)  
 (2) Seat adjusters failed  
 (3) Seat back folding locks or "seat back" failed (specify): \_\_\_\_\_  
 (4) Seat track/anchors failed  
 (5) Deformed by impact of occupant  
 (6) Deformed by passenger compartment intrusion, (specify): \_\_\_\_\_  
 (7) Combination of above (specify): \_\_\_\_\_  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

EMS  
 Altered  
 unknown  
 orig. position

## CHILD SAFETY SEAT

55. Child Safety Seat Make/Model 0 0 0  
(000) No child safety seat  
Applicable codes are found in your NASS CDS  
Data Collection, Coding and Editing  
(950) Built-in child safety seat  
(997) Other make/model (specify):  
  
(998) Unknown make/model  
(999) Unknown if child safety seat used

56. Type of Child Safety Seat 0  
(0) No child safety seat  
(1) Infant seat  
(2) Toddler seat  
(3) Convertible seat  
(4) Booster seat - with shield  
(5) Booster seat - without shield  
(7) Other type child safety seat (specify):  
  
(8) Unknown child safety seat type  
(9) Unknown if child safety seat used

57. Child Safety Seat Orientation 0 0  
(00) No child safety seat  
  
*Designed for Rear Facing for This Age/Weight*  
(01) Rear facing  
(02) Forward facing  
(08) Other orientation (specify):  
  
(09) Unknown orientation  
  
*Designed For Forward Facing for This Age/Weight*  
(11) Rear facing  
(12) Forward facing  
(18) Other orientation (specify):  
  
(19) Unknown orientation  
  
*Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight*  
(21) Rear facing  
(22) Forward facing  
(28) Other orientation (specify):  
  
(29) Unknown orientation  
  
(99) Unknown if child safety seat used

58. Child Safety Seat Harness Usage 0 0  
  
59. Child Safety Seat Shield Usage 0 0  
  
60. Child Safety Seat Tether Usage 0 0

Note: Options below applicable to  
Variables OA58-OA60.

(00) No child safety seat

*Not Designed With Harness/Shield/Tether*

(01) After market harness/shield/tether  
added, not used  
(02) After market harness/shield/tether used  
(03) Child safety seat used, but no after market  
harness/shield/tether added  
(09) Unknown if harness/shield/tether  
added or used

*Designed With Harness/Shield/Tether*

(11) Harness/shield/tether not used  
(12) Harness/shield/tether used  
(19) Unknown if harness/shield/tether used

*Unknown If Designed With Harness/Shield/Tether*

(21) Harness/shield/tether not used  
(22) Harness/shield/tether used  
(29) Unknown if harness/shield/tether used  
  
(99) Unknown if child safety seat used



**INJURY CONSEQUENCES****61. Injury Severity (Police Rating)**4

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

**62. Treatment - Mortality**1

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):

*Nonfatal*

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (7) Treatment - other (specify):
- (8) Transported to a medical facility-unknown if treated
- (9) Unknown

**63. Type Of Medical Facility (for Initial Treatment)**1

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):
- (9) Unknown

**64. Hospital Stay**00

- (00) Not Hospitalized
- Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

**65. Working Days Lost**62

- Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

**STOP WORK HERE****VARIABLES 66-74****TO BE CODED BY THE ZONE CENTER**

**TO BE CODED BY THE ZONE CENTER****INJURY CONSEQUENCES****TRAUMA DATA**66. Time to Death 01

Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)

- (00) Not fatal  
(96) Fatal - ruled disease  
(99) Unknown

67. 1st Medically Reported Cause of Death 0168. 2nd Medically Reported Cause of Death 0369. 3rd Medically Reported Cause of Death 07

Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death

- (00) Not fatal or no additional causes  
(96) Mode of death given but specific injuries are not linked to cause of death. (specify):

(97) Other result (includes fatal ruled disease) (specify):

(99) Unknown

70. Number of Recorded Injuries for This Occupant 21

Code the actual number of injuries recorded for this occupant.

- (00) No recorded injuries  
(97) Injured, details unknown  
(99) Unknown if injured

71. Glasgow Coma Scale (GCS) Score 02  
(at Medical Facility)

- (00) Not injured  
(01) Injured - not treated at medical facility  
(02) No GCS Score at medical facility  
(03-15) Code the actual value of the initial GCS Score recorded at medical facility.  
(97) Injured, details unknown  
(99) Unknown if injured

72. Was the Occupant Given Blood? 1

- (1) No - blood not given  
(2) Yes - blood given  
(specify units):  
(9) Unknown if blood given

73. Arterial Blood Gases (ABG) - HCO<sub>3</sub> 01

- (00) Not injured  
(01) Injured, ABGs not measured or reported  
(02-50) Code the actual value of the HCO<sub>3</sub>  
(96) ABGs reported, HCO<sub>3</sub> unknown  
(97) Injured, details unknown  
(99) Unknown if injured

**BELT USE DETERMINATION**74. Primary Source of Belt Use Determination 1

- (0) Not equipped/not available/destroyed or rendered inoperative  
(1) Vehicle inspection  
(2) Official injury data  
(3) Driver/occupant interview  
(8) Other (specify):  
(9) Unknown if belt used

**Appendix I:**

**NASS CDS OCCUPANT INJURY FORM:**

**CASE VEHICLE DRIVER**



U.S. Department of Transportation  
National Highway Traffic Safety  
Administration

# OCCUPANT INJURY FORM

Form Approved  
O.M.B. No. 2127-0021  
NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

10

3. Vehicle Number

01

2. Case Number - Stratum

9505

4. Occupant Number

01

## INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

Source of Injury Data	A.I.S. - 90						Injury Source	Injury Source Confidence Level	Direct/Indirect Injury	Occupant Area Intrusion Number	
	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect					
Laceration 1st Brain Stem	5. <u>1</u>	6. <u>1</u>	7. <u>4</u>	8. <u>02</u>	9. <u>12</u>	10. <u>6</u>	11. <u>8</u>	12. <u>170</u>	13. <u>2</u>	14. <u>2</u>	15. <u>00</u>
Subarachnoid 2nd hemorrhage	16. <u>1</u>	17. <u>1</u>	18. <u>4</u>	19. <u>06</u>	20. <u>84</u>	21. <u>3</u>	22. <u>9</u>	23. <u>170</u>	24. <u>2</u>	25. <u>2</u>	26. <u>00</u>
Lacerations 3rd to aorta, hkg not confined to mediastinum	27. <u>1</u>	28. <u>4</u>	29. <u>2</u>	30. <u>02</u>	31. <u>18</u>	32. <u>6</u>	33. <u>4</u>	34. <u>175</u>	35. <u>2</u>	36. <u>1</u>	37. <u>00</u>
Lacerations 4th Liver	38. <u>1</u>	39. <u>5</u>	40. <u>4</u>	41. <u>18</u>	42. <u>22</u>	43. <u>2</u>	44. <u>1</u>	45. <u>004</u>	46. <u>2</u>	47. <u>1</u>	48. <u>00</u>
Multiple 5th Bilateral rib Fractures	49. <u>1</u>	50. <u>4</u>	51. <u>5</u>	52. <u>02</u>	53. <u>40</u>	54. <u>4</u>	55. <u>3</u>	56. <u>175</u>	57. <u>2</u>	58. <u>1</u>	59. <u>00</u>
Fractured 6th Sternum	60. <u>1</u>	61. <u>4</u>	62. <u>5</u>	63. <u>08</u>	64. <u>04</u>	65. <u>2</u>	66. <u>4</u>	67. <u>175</u>	68. <u>2</u>	69. <u>1</u>	70. <u>00</u>
Fx/Dislocation 7th C12 no cord evidence	71. <u>1</u>	72. <u>6</u>	73. <u>5</u>	74. <u>02</u>	75. <u>28</u>	76. <u>3</u>	77. <u>6</u>	78. <u>201</u>	79. <u>3</u>	80. <u>2</u>	81. <u>00</u>
Abrasion 8th below Ear	82. <u>1</u>	83. <u>1</u>	84. <u>9</u>	85. <u>02</u>	86. <u>02</u>	87. <u>1</u>	88. <u>2</u>	89. <u>001</u>	90. <u>2</u>	91. <u>1</u>	92. <u>00</u>
Abrasion 9th axillary area	93. <u>1</u>	94. <u>2</u>	95. <u>9</u>	96. <u>02</u>	97. <u>02</u>	98. <u>1</u>	99. <u>2</u>	100. <u>001</u>	101. <u>2</u>	102. <u>1</u>	103. <u>00</u>
Abrasion 10th lower lip	104. <u>1</u>	105. <u>2</u>	106. <u>9</u>	107. <u>02</u>	108. <u>02</u>	109. <u>1</u>	110. <u>8</u>	111. <u>001</u>	112. <u>2</u>	113. <u>1</u>	114. <u>00</u>

## OCCUPANT INJURY DATA

	Source of Injury Data	A.I.S. - 90						Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
		Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect				
Abrasion chin 11th	<u>1</u>	<u>2</u>	<u>9</u>	<u>02</u>	<u>02</u>	<u>1</u>	<u>8</u>	<u>163</u>	<u>1</u>	<u>1</u>	<u>00</u>
Contusion nose 12th	<u>1</u>	<u>2</u>	<u>9</u>	<u>04</u>	<u>02</u>	<u>1</u>	<u>4</u>	<u>001</u>	<u>2</u>	<u>1</u>	<u>00</u>
Contusion lower lip 13th	<u>1</u>	<u>2</u>	<u>9</u>	<u>04</u>	<u>02</u>	<u>1</u>	<u>8</u>	<u>001</u>	<u>2</u>	<u>1</u>	<u>00</u>
Lacerations to lip + angles of mouth 14th	<u>1</u>	<u>2</u>	<u>9</u>	<u>06</u>	<u>02</u>	<u>1</u>	<u>8</u>	<u>001</u>	<u>2</u>	<u>1</u>	<u>00</u>
Abrasions whole neck 15th	<u>1</u>	<u>3</u>	<u>9</u>	<u>02</u>	<u>02</u>	<u>1</u>	<u>0</u>	<u>170</u>	<u>1</u>	<u>1</u>	<u>00</u>
Contusion @ R + 16th breasts	<u>1</u>	<u>4</u>	<u>9</u>	<u>04</u>	<u>02</u>	<u>1</u>	<u>4</u>	<u>175</u>	<u>2</u>	<u>1</u>	<u>00</u>
Contusion upper abdomen 17th	<u>1</u>	<u>5</u>	<u>9</u>	<u>04</u>	<u>02</u>	<u>1</u>	<u>7</u>	<u>004</u>	<u>2</u>	<u>1</u>	<u>00</u>
Abrasions 18th 5 back	<u>1</u>	<u>5</u>	<u>9</u>	<u>02</u>	<u>02</u>	<u>1</u>	<u>2</u>	<u>252</u>	<u>3</u>	<u>1</u>	<u>00</u>
Abrasion 19th 2 fingers	<u>1</u>	<u>7</u>	<u>9</u>	<u>02</u>	<u>02</u>	<u>1</u>	<u>2</u>	<u>170</u>	<u>2</u>	<u>1</u>	<u>00</u>
Abrasion 20th 15 fingers	<u>1</u>	<u>7</u>	<u>9</u>	<u>04</u>	<u>02</u>	<u>1</u>	<u>1</u>	<u>170</u>	<u>2</u>	<u>1</u>	<u>00</u>
Contusion 21st 16 thigh	<u>1</u>	<u>8</u>	<u>9</u>	<u>04</u>	<u>02</u>	<u>1</u>	<u>1</u>	<u>004</u>	<u>3</u>	<u>1</u>	<u>00</u>
22nd	—	—	—	—	—	—	—	—	—	—	—
23rd	—	—	—	—	—	—	—	—	—	—	—
24th	—	—	—	—	—	—	—	—	—	—	—
25th	—	—	—	—	—	—	—	—	—	—	—

Injuries are from Autopsy!

# OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

- Windshield starred (ET, EN)

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)

- Obvious bruising to chest, face, + tracheal area (ET)

Abrasion below (L) ear (1.1 x 0.5 cm)

- Laceration upper lip, (L) of midline
- Laceration (R) angle of mouth (1 cm)
- Contusions + abrasions on lower lip
- Abrasion, submental (8 x 3 cm), on (L) neck side (4 x 1 cm), + on (R) and mid neck (12 x 1 cm)
- Bruise (R) breast medial to nipple (1 cm diameter)
- Bruise, anterior, proximal, (R) thigh (0.5 cm diameter)
- bruising nose (2.5 x 2 cm)
- Abrasion (L) maxillary area (1.0 x 0.5 cm)
- Laceration (L) lateral angle of mouth (1.5 cm)
- Abrasion chin (3 x 0.3 cm) from jacket
- Bruises (L) breast (5 x 3 cm) toward midline + lateral to nipple
- Bruises 2, parallel + slightly curved with abrasion (10 x 2.8 cm), mid-abdomen

• Abrasions, 2, between middle + ring fingers dorsal (L) hand

- Bruising noted across neck, (L) + (R) breast, + sternum (EN)

Abrasion (R) neck (5 x 1 cm)

• Abrasions (R) flank, multiple, faint, superficial

• Abrasions, 3, between index + middle fingers (2.5 x 3 cm), dorsal (R) hand

## OCCUPANT INJURY CLASSIFICATION

Body Region	Specific Anatomic Structure	Level of Injury	Aspect
(1) Head		Specific injuries are assigned consecutive two-digit numbers beginning with 02.	(1) Right
(2) Face			(2) Left
(3) Neck			(3) Bilateral
(4) Thorax	<u>Vessels, Nerves, Organs.</u>		(4) Central
(5) Abdomen	<u>Bones, Joints</u> are assigned consecutive two digit numbers beginning with 02.		(5) Anterior
(6) Spine		To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.	(6) Posterior
(7) Upper Extremity			(7) Superior
(8) Lower Extremity			(8) Inferior
(9) Unspecified	The exceptions to this rule apply to:		(9) Unknown
			(0) Whole region
<b>Type of Anatomic Structure</b>	<u>Whole Area</u>		
(1) Whole Area	(02) Skin - Abrasion		
(2) Vessels	(04) Skin - Contusion		
(3) Nerves	(06) Skin - Laceration		
(4) Organs (includes Muscles/ligaments)	(08) Skin - Avulsion		
(5) Skeletal (includes joints)	(10) Amputation		
(6) Head - LOC	(20) Burn		
(9) Skin	(30) Crush		
	(40) Degloving		
	(50) Injury - NFS		
	(90) Trauma, other than mechanical		
	<u>Head - LOC</u>		
	(02) Length of LOC		
	(04) Level		
	(06) of		
	(08) Consciousness		
	(10) Concussion		
	<u>Spine</u>		
	(02) Cervical		
	(04) Thoracic		
	(06) Lumbar		

## Abbreviated Injury Scale

- (1) Minor Injury  
 (2) Moderate Injury  
 (3) Serious Injury  
 (4) Severe Injury  
 (5) Critical Injury  
 (6) Maximum (untreatable)  
 (7) Injured, unknown severity

SOURCE OF INJURY DATA	INJURY SOURCE CONFIDENCE LEVEL	DIRECT/INDIRECT INJURY
<u>OFFICIAL RECORDS</u> (1) Autopsy records with or without hospital/medical records (2) Hospital/medical records other than emergency room (e.g., discharge summary) (3) Emergency room records only (including associated X-rays or other lab reports) (4) Private physician, walk-in or emergency clinic  <u>UNOFFICIAL RECORDS</u> (5) Lay coroner report (6) E.M.S. personnel (7) Interviewee (8) Other source (specify): (9) Police	(1) Certain (2) Probable (3) Possible (9) Unknown	(1) Direct contact injury (2) Indirect contact injury (3) Noncontact injury (7) Injured, unknown source

# OFFICIAL INJURY DATA — SKELETAL INJURIES

Restrained?

— No ? (E)  
— Yes

Blood Alcohol  
Level (mg/dl)

BAL = \_\_\_\_

Glasgow Coma  
Scale Score

GCSS = 3  
(ET)

Units of Blood  
Given

Units = \_\_\_\_

Arterial Blood  
Gases

pH = \_\_\_\_

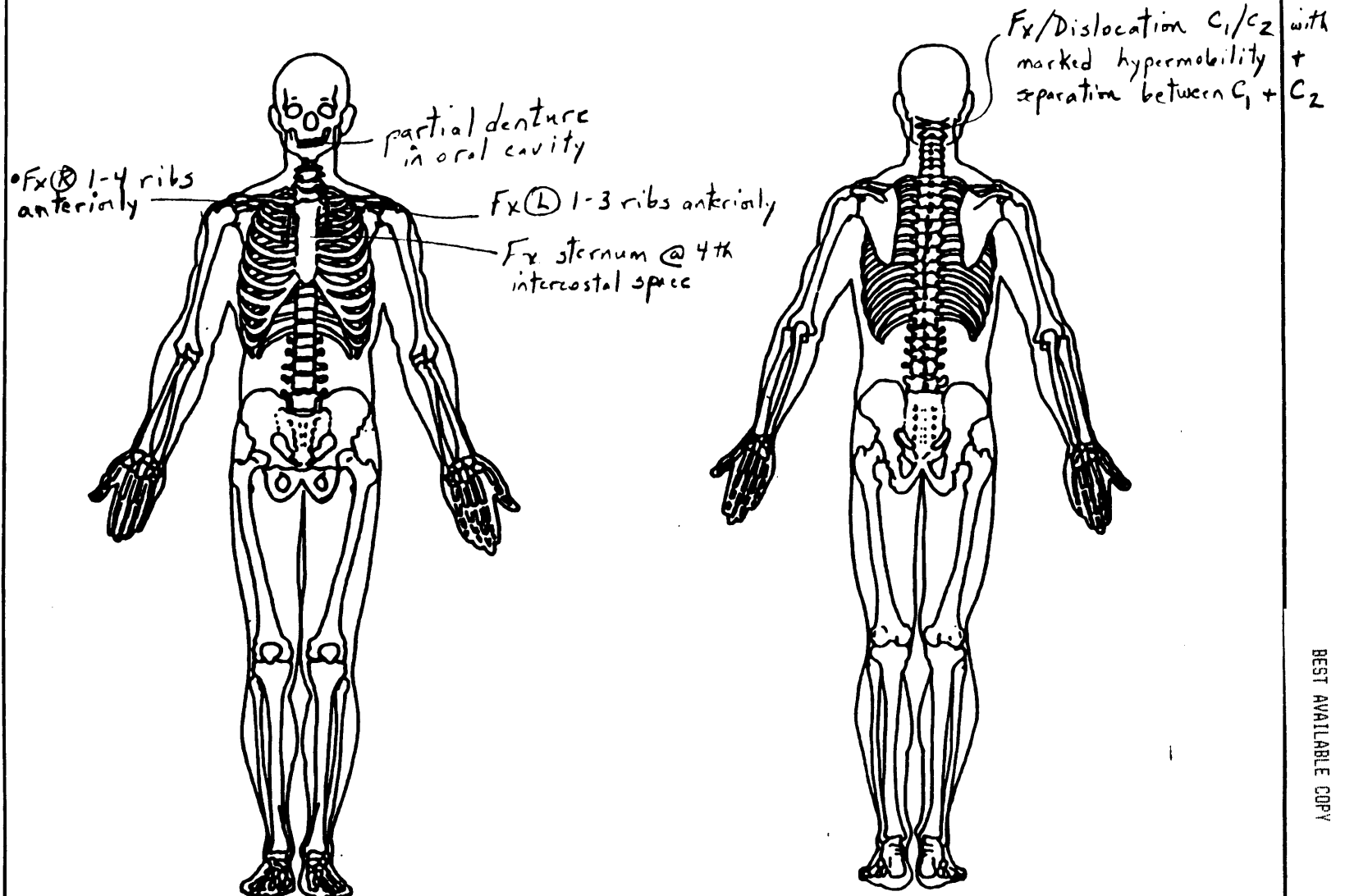
PO<sub>2</sub> = \_\_\_\_

PCO<sub>2</sub> = \_\_\_\_

HCO<sub>3</sub> = \_\_\_\_

Air bag deployed (ET, EN)

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)





## INJURY SOURCES

## FRONT

- (001) Windshield  
 (002) Mirror  
 (003) Sunvisor  
 (004) Steering wheel rim  
 (005) Steering wheel hub/spoke  
 (006) Steering wheel (combination of codes 004 and 005)  
 (007) Steering column, transmission selector lever, other attachment  
 (008) Cellular telephone or CB radio  
 (009) Add on equipment (e.g., tape deck, air conditioner)  
 (010) Left instrument panel and below  
 (011) Center instrument panel and below  
 (012) Right instrument panel and below  
 (013) Glove compartment door  
 (014) Knee bolster  
 (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)  
 (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)  
 (017) Windshield reinforced by exterior object (specify):  
 (019) Other front object (specify):

## LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests  
 (052) Left side hardware or armrest  
 (053) Left A (A1/A2)-pillar  
 (054) Left B-pillar  
 (055) Other left pillar (specify):  
 (056) Left side window glass  
 (057) Left side window frame  
 (058) Left side window sill  
 (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.  
 (060) Other left side object (specify):

## RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests

- (102) Right side hardware or armrest  
 (103) Right A (A1/A2)-pillar  
 (104) Right B-pillar  
 (105) Other right pillar (specify):  
 (106) Right side window glass  
 (107) Right side window frame  
 (108) Right side window sill  
 (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.  
 (110) Other right side object (specify):

## INTERIOR

- (151) Seat, back support  
 (152) Belt restraint webbing/buckle  
 (153) Belt restraint B-pillar or door frame attachment point  
 (154) Other restraint system component (specify):  
 (155) Head restraint system  
 (160) Other occupants (specify):  
 (161) Interior loose objects  
 (162) Child safety seat (specify):  
 (163) Other interior object (specify):

## AIR BAG

- (170) Air bag-driver side  
 (171) Air bag-driver side and eyewear  
 (172) Air bag-driver side and jewelry  
 (173) Air bag-driver side and object held  
 (174) Air bag-driver side and object in mouth  
 (175) Air bag compartment cover-driver side  
 (176) Air bag compartment cover-driver side and eyewear  
 (177) Air bag compartment cover-driver side and jewelry  
 (178) Air bag compartment cover-driver side and object held  
 (179) Air bag compartment cover-driver side and object in mouth  
 (180) Air bag-passenger side  
 (181) Air bag-passenger side and eyewear  
 (182) Air bag-passenger side and jewelry

- (183) Air bag-passenger side and object held  
 (184) Air bag-passenger side and object in mouth  
 (185) Air bag compartment cover-passenger side  
 (186) Air bag compartment cover-passenger side and eyewear  
 (187) Air bag compartment cover-passenger side and jewelry  
 (188) Air bag compartment cover-passenger side and object held  
 (189) Air bag compartment cover-passenger side and object in mouth  
 (190) Other air bag (specify):  
 (195) Other air bag compartment cover (specify):

## ROOF

- (201) Front header  
 (202) Rear header  
 (203) Roof left side rail  
 (204) Roof right side rail  
 (205) Roof or convertible top

## FLOOR

- (251) Floor (including toe pan)  
 (252) Floor or console mounted transmission lever, including console  
 (253) Parking brake handle  
 (254) Foot controls including parking brake

## REAR

- (301) Backlight (rear window)  
 (302) Backlight storage rack, door, etc.  
 (303) Other rear object (specify):

## ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration  
 (402) Steering control devices (attached to OEM steering wheel)  
 (403) Steering knob attached to steering wheel  
 (405) Replacement steering wheel (i.e., reduced diameter)  
 (406) Joy stick steering controls  
 (407) Wheelchair tie-downs  
 (408) Modification to seat belts, (specify):  
 (409) Additional or relocated switches, (specify):  
 (410) Raised roof

- (411) Wall mounted head rest (used behind wheel chair)  
 (412) Other adaptive device (specify):

## EXTERIOR of OCCUPANT'S VEHICLE

- (451) Hood  
 (452) Outside hardware (e.g., outside mirror, antenna)  
 (453) Other exterior surface or tires (specify):  
 (454) Unknown exterior objects

## EXTERIOR OF OTHER MOTOR VEHICLE

- (501) Front bumper  
 (502) Hood edge  
 (503) Other front of vehicle (specify):  
 (504) Hood  
 (505) Hood ornament  
 (506) Windshield, roof rail, A-pillar  
 (507) Side surface  
 (508) Side mirrors  
 (509) Other side protrusions (specify):  
 (510) Rear surface  
 (511) Undercarriage  
 (512) Tires and wheels  
 (513) Other exterior of other motor vehicle (specify):  
 (514) Unknown exterior of other motor vehicle

## OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

- (551) Ground  
 (598) Other vehicle or object (specify):  
 (599) Unknown vehicle or object

## NONCONTACT INJURY

- (601) Fire in vehicle  
 (602) Flying glass  
 (603) Other noncontact injury source (specify):  
 (604) Air bag exhaust gases  
 (697) Injured, unknown source

# OFFICIAL INJURY DATA — INTERNAL INJURIES

Arrived ER in fully trauma arrest (EN)

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)

• No spontaneous respirations, pupils fixed + dilated, no pulse or BP (EN)

• Upper spinal cord is soft

• Avulsion of Ponto-medullary Junction (softening with hemorrhage)

• Diffuse subarachnoid hemorrhage in base of brain

• Hemomediastinum, anteriorly, large

• Hemopericardium (100-120 ml)

• Lacerations, 3, to aorta ascending (5 cm)

• arch, near origin of innominate artery (3 cm)

• Between two above tears is an intimal tear (1.5 cm)

• (R) hemothorax, 1000 ml

• Lacerations, multiple, superficial, posterior

• (L) lobe of liver

85

Blood loss 20% threshold

$$\frac{145 - 150}{2} \times .4536 \times 15 = 100.4$$

# CAUSE OF DEATH

BEST AVAILABLE COPY

Multiple injuries due to auto collision

## ICD-9-CM

### OTHER DRUGS (GV16)

Specimen Test Type	Drug(s)	Drug Type
<input type="checkbox"/> Blood and urine tests <input checked="" type="checkbox"/> Blood test only <input type="checkbox"/> Urine test only <input type="checkbox"/> Other test <input type="checkbox"/> Unspecified	Caffeine  Negative for alcohols, analgesics, anticonvulsants, antidepressants, antihistamines, antipsychotics, narcotic analgesics, sedative hypnotics, tranquilizers + miscellaneous over-the- counter drugs	Other

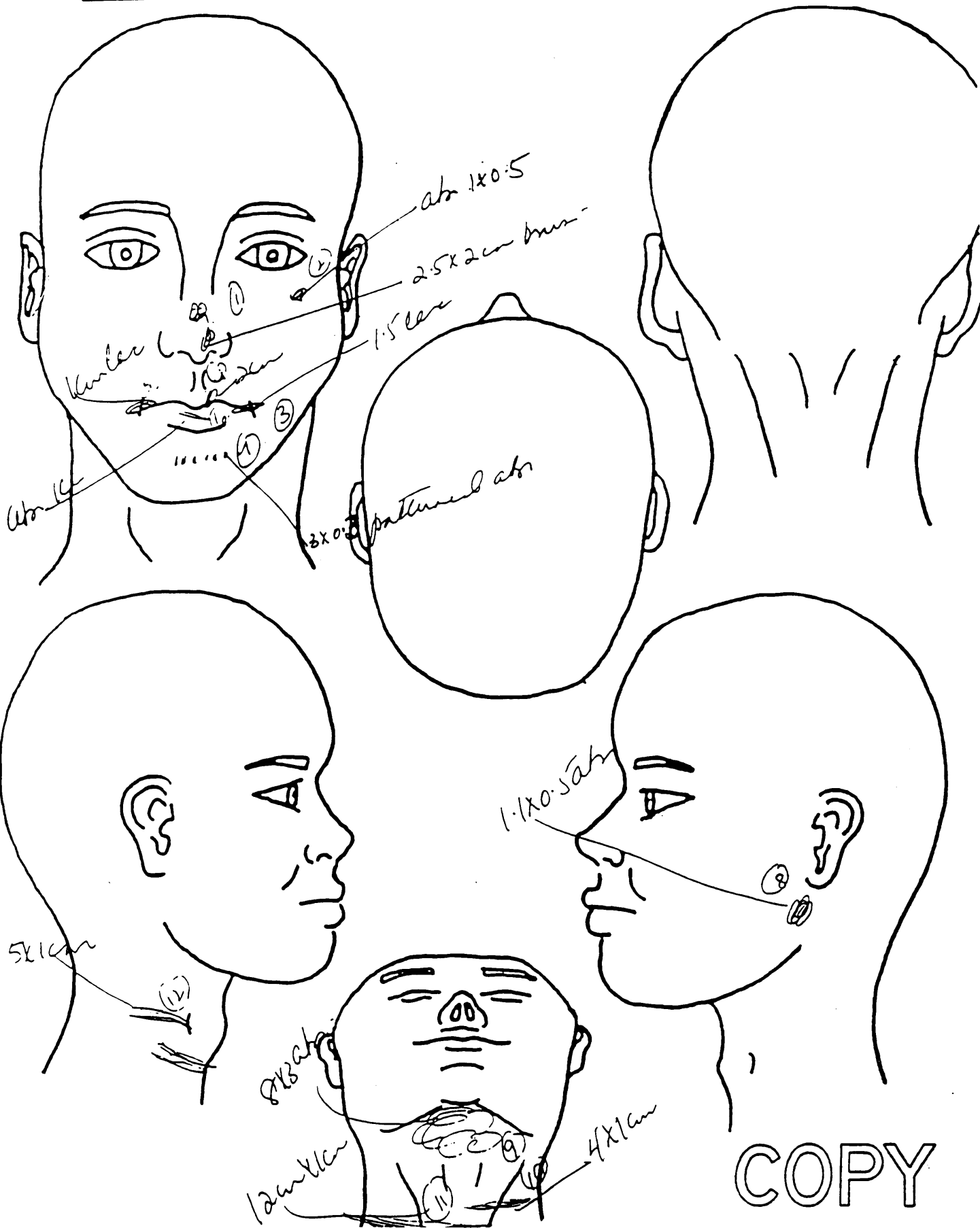
### MEDICAL RECORD ABBREVIATIONS

Symbol	Record Type Description
A	Autopsy—medical information based upon an invasive examination of a body
ME	Medical examiner's record—where the information reported on the patient is based on a non-invasive examination of the body
AR	Admission record/summary—any medical information on this record should be considered as post-ER since it summarizes the patient's admission; these records are common in short hospitalizations and usually only contain: admission DX(s), final DX(s), and a listing of surgical treatments; ICD-9-CM codes are frequently available.
FS	Admission/discharge face sheet—face sheets are essentially the same as admission record/summaries and contain the same types of information as discussed above
DS	Discharge summary—shorten history of a patient's hospitalization highlighting the patient's major injuries; this record is often written from the perspective of its author which in many cases is a consultant
OS	Operative record—summary of a performed surgical operation often providing detailed information about a specific trauma; patients who survive the surgery are normally admitted; thus, this record is normally considered post-ER; however, if this record results from an outpatient surgery, then treat it as emergency-room related
FX	Radiographic records—taken after the patient has been admitted, or while in surgery or intensive care
FN	Patient progress notes—supplemental record containing additional nurses notes taken after the patient's admission
HP	History and physical exam—medical history and the results of the physical exam obtained by the emergency room physician assigned to the patient upon arrival at the emergency room
CN	Consultation record—consultations are in essence additional history and physical exams performed by doctors whose expertise was requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission
ER	Emergency room report—where the author of this information is undefined
EN	Emergency room nurse—"nurse/complaint of" section on the emergency room report
ED	Emergency room doctor—"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., doctor portion of emergency room report)
NN	Nurse notes—supplemental record containing additional notes taken by the emergency room nurse(s)
EX	Radiographic records—taken during the patients stay in the emergency room
CV	Coroner's verdict—statement of cause of death for legal specific regarding injuries; care must be exercised to ascertain the credentials of the verdict's author.
CR	Coroner's report—medical information based upon a noninvasive examination performed by a person who is not a doctor but who has the title of a coroner
ET	Emergency medical technician—report by a person who qualifies as an emergency medical services technician (EMS or EMT)
O	Other source—medical information based on an other source (e.g., newspaper, DVM—Doctor of Veterinary Medicine)

CASE NO. \_\_\_\_\_

DATE OF AUTOPSY \_\_\_\_\_  
INSPECTION \_\_\_\_\_

SEX \_\_\_\_\_ RACE \_\_\_\_\_ AGE \_\_\_\_\_



COPY

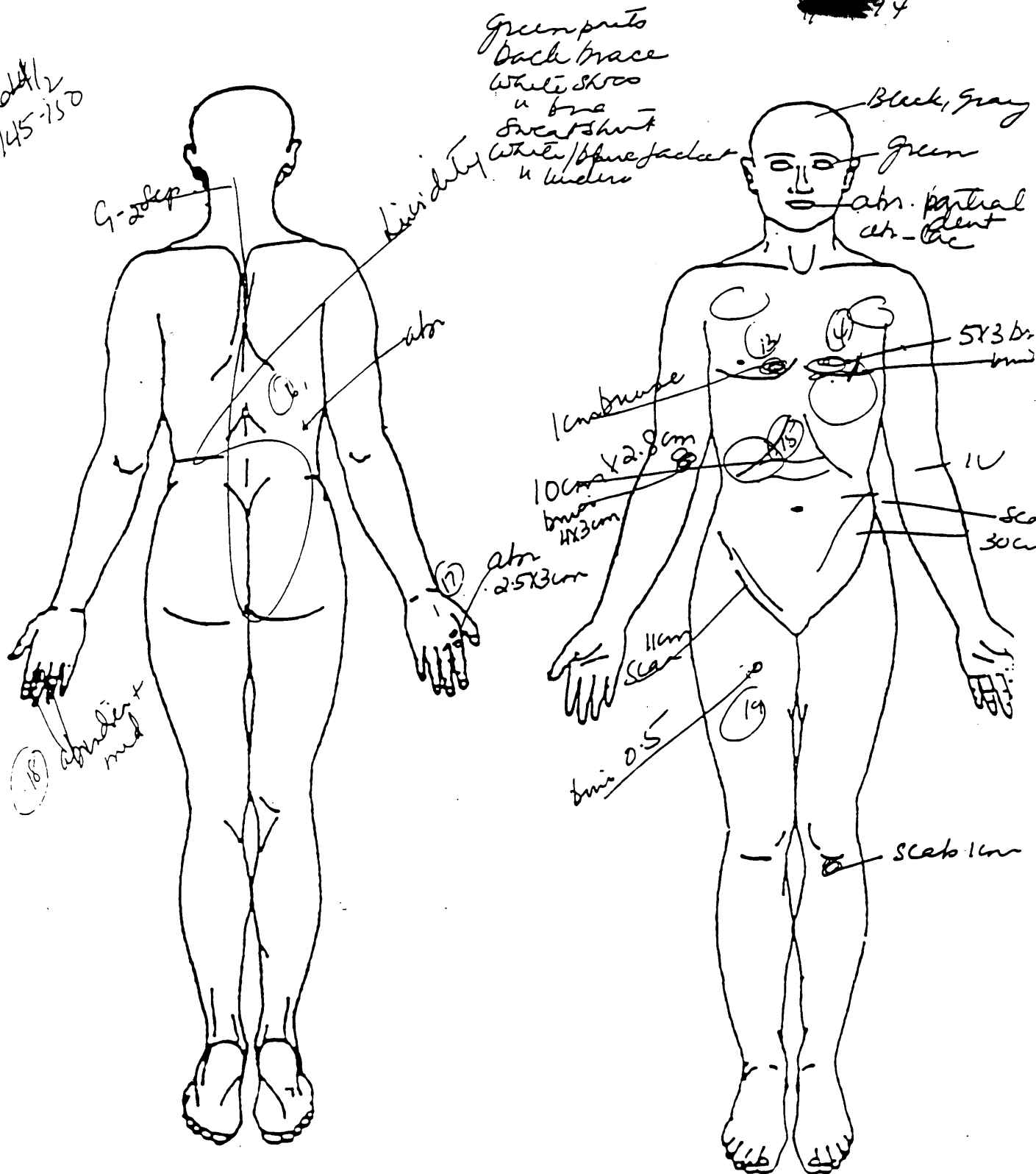
NAME \_\_\_\_\_

CASE NO. \_\_\_\_\_

AGE 51 SEX F RACE W

~~194~~  
~~194~~

6/4/2  
145-150



COPY

M.D.

COPY

## AUTOPSY REPORT

Case #

Name:

Date of Death: [REDACTED]/94

Address:

Date of Autopsy: [REDACTED]/94

Time of Autopsy: 1000

Place of Autopsy: [REDACTED] County Coroner's Office

Age: 51

Sex: Female

Race: White

**EXTERNAL EXAMINATION:** The body is that of a 51 year old, white female, weighing approximately 145 - 150 pounds and measuring 64 inches. The body is received dressed in a pair of green pants, a white back brace, white shoes, white underwear, white bra, a multi-colored sweatshirt and a white and blue jacket with a plastic zipper. Rigor mortis is present throughout and livor mortis is present in the posterior dependent parts.

The hair is black with some gray in it. The irides are green, the corneas are cloudy, the pupils are dilated and the sclerae are white. The external ears and nose are intact. There are areas of bruising on the nose. The teeth are absent. There is a partial denture in the oral cavity. There are multiple lacerations and abrasions on the lip to be described under Evidence of Injury. The chin shows a pattern area of abrasion. The sub-mental region shows a large area of abrasion. There are horizontal areas of abrasion on the neck to be described under Evidence of Injury.

The chest is symmetrical. The breasts are symmetrical. There is bruising on both the breasts. There are chest leads on both sides of the chest. The abdomen is soft. The mid-abdomen region shows parallel abrasions to be

described under Evidence of Injury. There is an oblique scar on the right lower quadrant of the abdomen measuring 11 cm in length. There is an oblique scar on the left flank region extending towards the anterior midline and posteriorly and measuring approximately 30 cm in length.

The external genitalia are those of a normal female..

The anterior aspect of the left knee shows a small scab, measuring 1 cm in diameter. The back shows lividity. The fingernails are clean

## EVIDENCE OF TREATMENT

- 1 There are chest leads on the anterior chest.
- 2 There is an intravenous catheter in place in the left antecubital fossae.
- 3 There is an intubation tube in the trachea. The outer part of this has been cut off but it is found in place in the trachea.

## EVIDENCE OF EXTERNAL INJURY

- 1 On the nose are two superficial areas of bruising covering an area measuring 2.5 x 2 cm.
2. The left maxillary area shows a small area of abrasion measuring 1 x 0.5 cm.
3. The left lateral angle of the mouth shows a laceration measuring 1.5 cm in length.
- 4 The upper lip, just to the left of the midline shows a laceration measuring 2 cm in length.
5. The right lateral angle of the mouth shows a laceration measuring 1 cm in length.
6. There are multiple areas of contusion on the lower lip with areas of abrasion.
7. On the chin are parallel, small, vertical areas of abrasion forming a pattern and covering an area measuring 3 x 0.3 cm. This pattern fits the plastic zipper from the jacket.

- 8 Just below the left ear is an area of abrasion measuring 1.1 x 0.5 cm.
- 9 The submental region shows an area of abrasion measuring 8 x 3 cm.
- 10 The left side of the neck, just below the submental region shows a horizontal area of abrasion measuring 4 x 1 cm.
- 11 There is a horizontal area of abrasion in the mid-portion of the neck and also on the right side measuring 12 x 1 cm.
- 12 On the right side of the neck is another area of abrasion measuring 5 x 1 cm.
- 13 The right breast, medial to the nipple shows a bruise measuring 1 cm in diameter.
- 14 The left breast shows a bruise measuring 5 x 3 cm toward the midline from the nipple and there is also a faint bruise just lateral to the nipple.
- 15 The upper abdomen in the midline shows two parallel, slightly curved areas of bruising with superficial abrasion and covering an area measuring 10 x 2.8 cm.
- 16 On the right flank region are multiple, minute areas of faint superficial abrasion.
- 17 The dorsal aspect of the right hand shows three areas of abrasion between the index finger and the middle finger covering an area measuring 2.5 x 3 cm.
- 18 The dorsal aspect of the left hand in the region of the mid finger and the ring finger shows two minute areas of abrasion.
- 19 The anterior aspect of the right thigh shows a faint bruise measuring 0.5 cm in diameter.

## EVIDENCE OF INTERNAL INJURY

- 1 The neck is markedly hypermobile and there is a large amount of hemorrhage in the muscles anterior to the vertebral column. There is a marked separation of the vertebral column between C1 and C2.



2. There is a diffuse subarachnoid hemorrhage in the base of the brain.
3. There is softening at the pontomedullary junction with a small amount of hemorrhage.
4. The upper spinal cord is soft.
5. There is a right hemothorax of about 1000 ml of blood.
6. There is a hemopericardium of about 100 to 120 of blood.
7. The ascending thoracic aorta shows a tear measuring 5 cm in length. The arch of the aorta, just to origin of the innominate artery shows another tear measuring 3 cm in length. Between the two tears is a small intimal tear measuring about 1.5 cm in length.
8. There are superficial, multiple areas of laceration on the posterior aspect of the left lobe of the liver.
9. The right 1st through the 4th ribs are fractured anteriorly. The left 1st through the 3rd ribs are fractured anteriorly. There is a fracture of the sternum at the 4th intercostal space.

## INTERNAL EXAMINATION

**Body Cavities:** The usual Y shaped incision is made. The right pleural cavity contains about 1000 ml of blood, the pericardial sac contains about 100 to 120 ml of blood. There is a large amount of hemorrhage in the anterior mediastinum, in the connective tissue around the heart and aorta.

**Cardiovascular System:** The heart weighs 450 gms. The epicardium is smooth. There is a large amount of hemorrhage around the ascending aorta and the arch of the aorta. The myocardium is firm and brown. The left ventricle is slightly hypertrophied measuring 1.7 cm in width. The valves are intact. The coronary arteries arise from their usual position. The left anterior descending coronary artery shows mild atherosclerosis with focal areas of about 30 % occlusion of the lumen. The right coronary artery shows about 50 - 60 % occlusion of the lumen in its mid-portion by atherosclerosis. The left circumflex artery is patent and shows mild atherosclerosis. The ascending aorta and the arch of the aorta shows tears and the intimal tears that has been described. The descending thoracic aorta shows focal areas of atherosclerosis. The pulmonary arteries are patent.

TOXICOLOGY REPORT  
[REDACTED] 1994

Re:

[REDACTED] County Coroner

Autopsy No [REDACTED]  
Date of Death [REDACTED]/94  
Lab No [REDACTED]

cc: Dr.

SPECIMENS: One orange top tube of blood, two blue top tubes of blood and one white top tube of vitreous fluid were received on [REDACTED]/94.

TEST PERFORMED: Autopsy Panel I

## ANALYTICAL RESULTS:

1. Blood: Carboxyhemoglobin - <5% of Total Hemoglobin  
Negative for Alcohols  
Positive - Caffeine

2. Vitreous Fluid: Negative for Alcohols

## 3. Negative Test Findings:

Blood and Vitreous Fluid:

Negative for alcohols including acetone, ethanol  
isopropanol, and methanol.

Blood:

Negative for analgesics, anticonvulsants,  
antidepressants, antihistamines, antipsychotics,  
cardiovascular, drugs of abuse, narcotic analgesics,  
sedative hypnotics, tranquilizers, and the following  
miscellaneous and/or over the counter drugs including:  
atropine, cotinine, dextromethorphan, ephedrine,  
guaifenesin, ketamine, nicotine, papaverine, phendimetrazine,  
phenethylamine, phentermine, phenylpropanolamine, procaine,  
pyrilamine, strychnine, and triamterene.

[REDACTED] County Coroner

Lab No.

Page No 2

## COMMENT:

The normal range for Carboxyhemoglobin is <5% of  
Total Hemoglobin.

\_\_\_\_\_  
Ph.D.  
Director of Laboratories

END OF REPORT

COPY

CAUSE OF DEATH.

due to

MULTIPLE INJURIES  
AUTO - AUTO COLLISION

DIAGNOSIS:

1. Fracture and Dislocation of the Cervical Vertebral Column.
2. Avulsion of the Ponto-Medullary Junction.
3. Lacerations and Intimal Tears of the Aorta.
4. Right Hemothorax.
5. Hemopericardium.
6. Multiple Fractures of the Ribs.
7. Laceration of the Liver.

OPINION: This 51 year old, white female, [REDACTED] died as the result of multiple injuries sustained as a result of being the driver of an automobile which struck another automobile and then was hit head on by another vehicle.

1 DATE OF RUN 94		4 PROVIDER/DEPARTMENT		8 DEPT NO.					
2 LICENSE PLATE NO.		5 LOCATION OF CALL		9 PT. 1 OF 1					
3 TIME INFORMATION		6 PRIOR TO ARRIVAL		7 NATURE OF CALL					
DISPATCH 1601		<input type="checkbox"/> NO TREATMENT <input type="checkbox"/> SEATBELTS OBSERVED <input type="checkbox"/> FIRST AID <input type="checkbox"/> SEATBELT USE STATED <input type="checkbox"/> EXTRICATION <input type="checkbox"/> HELMET WORN <input checked="" type="checkbox"/> MD ON SCENE <input type="checkbox"/> AMBULATORY <input type="checkbox"/> CPR BY <input type="checkbox"/> NAME		<input type="checkbox"/> CARDIAC <input type="checkbox"/> TRAUMA <input type="checkbox"/> CHEM ABUSE <input type="checkbox"/> MEDICAL <input type="checkbox"/> BURN <input type="checkbox"/> OB <input checked="" type="checkbox"/> VEHICLE ACCIDENT <input type="checkbox"/> PSYCH <input type="checkbox"/> INVALID ASSIST <input type="checkbox"/> OTHER					
ENROUTE 1607 4		ROAD CONDITIONS		10 COMMUNICATIONS					
ON LOCATION 1605 19		<input checked="" type="checkbox"/> DRY <input type="checkbox"/> FOG <input type="checkbox"/> ICE <input type="checkbox"/> WET <input type="checkbox"/> SNOW <input checked="" type="checkbox"/> HEAVY TRAFFIC		UNF-VOICE <input type="checkbox"/> EKG <input type="checkbox"/> MERCI <input checked="" type="checkbox"/> PHONE <input checked="" type="checkbox"/> GOOD <input type="checkbox"/> POOR <input type="checkbox"/> UNABLE <input type="checkbox"/>					
TO HOSPITAL 1624 4		OUT COME OF RUN <input checked="" type="checkbox"/> ALS <input type="checkbox"/> BLS		MD OR RN HANDLING CALL					
AT HOSPITAL 1632		<input type="checkbox"/> ASSESS/TREAT <input type="checkbox"/> REFUSED CARE <input checked="" type="checkbox"/> TRANSPORT <input type="checkbox"/> REFUSED TRANSP. <input type="checkbox"/> NO PT. CONTACT <input type="checkbox"/> RELEASE SIGNED <input type="checkbox"/> NO TRANSPORT <input type="checkbox"/> DOS		MEDICAL CONTROL HOSPITAL					
IN SERVICE		11 AMBULANCE REQUESTED BY POLICE		12 OTHER ASSISTANCE <input checked="" type="checkbox"/> FIRE <input checked="" type="checkbox"/> POLICE DEPT. <input type="checkbox"/> OTHER					
QUARTERS		OFFICER NAME		13 RECEIVING HOSPITAL					
14 PATIENT INFORMATION									
LAST FIRST MI		CHIEF COMPLAINT TRAUMA CODE							
HOME ADDRESS		MEDICATIONS UNK							
CITY STATE ZIP		PERSONAL PHYSICIAN UNK							
PHONE DOB AGE SEX WEIGHT		ALLERGIES <input type="checkbox"/> DENIES <input checked="" type="checkbox"/> UNKNOWN							
PAST HISTORY <input type="checkbox"/> HTN <input type="checkbox"/> CARDIAC <input type="checkbox"/> CVA <input type="checkbox"/> DIABETES <input type="checkbox"/> COPD <input type="checkbox"/> CANCER									
15 ASSESSMENT									
TIME	L R PUPILS	LEVEL OF CONSCIOUSNESS	RESPIRATORY EFFORT	L R LUNG SOUNDS	Skin COLOR	MOISTURE	TEMPERATURE	GLASGOW COMA SCALE	TRAUMA SCORE
1607	<input type="checkbox"/> MIDPOINT <input checked="" type="checkbox"/> DILATED <input type="checkbox"/> CONSTRICT <input type="checkbox"/> REACTIVE <input checked="" type="checkbox"/> FIXED	<input type="checkbox"/> ALERT <input type="checkbox"/> VERBAL <input type="checkbox"/> PAIN <input type="checkbox"/> UNRESPONSIVE <input type="checkbox"/> COMBATIVE	<input type="checkbox"/> NORMAL <input type="checkbox"/> LABORED <input type="checkbox"/> RETRACTIONS <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> ABSENT	<input type="checkbox"/> CLEAR <input type="checkbox"/> ABSENT <input type="checkbox"/> DECREASED <input type="checkbox"/> CRACKLES <input type="checkbox"/> WHEEZE <input type="checkbox"/> STRIDOR	<input type="checkbox"/> NORMAL <input type="checkbox"/> CYANOTIC <input type="checkbox"/> PALE / ASHEN <input type="checkbox"/> FLUSHED <input type="checkbox"/> JAUNDICED	<input checked="" type="checkbox"/> DRY <input type="checkbox"/> MOIST <input type="checkbox"/> DIAPHROR	<input type="checkbox"/> NORMAL <input type="checkbox"/> HOT <input checked="" type="checkbox"/> COOL / COLD	EYE 1 VERBAL 1 MOTOR 1 TOTAL 3	
1630	<input type="checkbox"/> MIDPOINT <input checked="" type="checkbox"/> DILATED <input type="checkbox"/> CONSTRICT <input type="checkbox"/> REACTIVE <input checked="" type="checkbox"/> FIXED	<input type="checkbox"/> ALERT <input type="checkbox"/> VERBAL <input type="checkbox"/> PAIN <input type="checkbox"/> UNRESPONSIVE <input type="checkbox"/> COMBATIVE	<input type="checkbox"/> NORMAL <input type="checkbox"/> LABORED <input type="checkbox"/> RETRACTIONS <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> ABSENT	<input type="checkbox"/> CLEAR <input type="checkbox"/> ABSENT <input type="checkbox"/> DECREASED <input type="checkbox"/> CRACKLES <input type="checkbox"/> WHEEZE <input type="checkbox"/> STRIDOR	<input type="checkbox"/> NORMAL <input type="checkbox"/> CYANOTIC <input type="checkbox"/> PALE / ASHEN <input type="checkbox"/> FLUSHED <input type="checkbox"/> JAUNDICED	<input type="checkbox"/> DRY <input type="checkbox"/> MOIST <input type="checkbox"/> DIAPHROR	<input type="checkbox"/> NORMAL <input type="checkbox"/> HOT <input checked="" type="checkbox"/> COOL / COLD	EYE 1 VERBAL 1 MOTOR 1 TOTAL 3	
16 TIME	VITAL SIGNS		RHYTHM	IV / MEDS / DEFIB	RATE DOSE	INTAKE ROUTE	SOP	SYS #	RESPONSE
1610	BP 0	P 0	RR 0	12/10 VENT					
1626	BP 0	P 0	RR 0	1V UNABLE					
1625	BP 0	P 0	RR 0	Asystole	5	ET	✓	429	NOTE
1630	BP 0	P 0	RR 0						
1632	BP 0	P 0	RR 0						
17 COMMENTS					18 TREATMENT AT SCENE				
Pt. involved in Motor Vehicle Accident - SEVERE FRONT END DAMAGE - Driver To INTERIOR - WELDED SHIELD STAFFED AIR TUG TO REMOVE PT. FOUND ON GROUND 2 Paramedics Began CPR. WITNESS STATES PT. DID NOT SEEM TO RESPOND TO ACCIDENT. Cervical Bruising To Chest Area + TRACHEAL AREA 2 Paramedics Pt. Found Immobilized. Vigorous Suctioning Of Blood During Intubation. Anesthesia Administered. Pt. Rec'd CPR - Pt. Unresponsive. Intubated.					<input type="checkbox"/> EXTRICATION TIME: <input type="checkbox"/> RESTRAINTS <input checked="" type="checkbox"/> VENTILATION <input checked="" type="checkbox"/> SPINAL IMMOBILIZATION <input checked="" type="checkbox"/> OXYGEN 25 LPM <input checked="" type="checkbox"/> CPR <input checked="" type="checkbox"/> SPLINT / TRACTION <input type="checkbox"/> CANNULA <input type="checkbox"/> MASK <input type="checkbox"/> INTUBATION TIME: <input type="checkbox"/> <input type="checkbox"/> MAST <input type="checkbox"/> ORAL/NASAL AIRWAY <input type="checkbox"/> ESOPHAGEAL TIME: <input type="checkbox"/> <input type="checkbox"/> WOUND CARE / DRESSINGS <input checked="" type="checkbox"/> SUCTION <input type="checkbox"/> BY:				
19 CREW SIGNATURE AND NUMBER					BODY SUBSTANCE EXPOSURE <input type="checkbox"/>				
PATIENT DISPOSITION					REPORT WRITTEN BY <input type="checkbox"/> CONT. SHEET <input type="checkbox"/>				
<input checked="" type="checkbox"/> TREATED/RELEASED <input type="checkbox"/> EXPIRED IN ED <input type="checkbox"/> ADMITTED <input type="checkbox"/> ICU <input type="checkbox"/> TRANSFERRED <input type="checkbox"/> CCU/CCU <input type="checkbox"/> OTHER					DIAGNOSIS				

④ DEPT. NO.

[illegible]

1) COMMENTS HISTORY  
ERI 1:10000 GIVES E & RESULTS. CPR CONTINUED & FAIR LINE  
SOUNDS AFTER INTUBATION. PT IN-LINE INTUBATED. NO OTHER  
OBVIOUS SIGNS OF INJURY. NOTED NO INTERCOSTAL RUPTURE  
DURING TRANSPORT.

**9 CREW SIGNATURES**

**SYS.**

**SVS**

**SYS.**

SYS

## ADDRESSOGRAPH AREA



## Hospital

## MEDICAL RECORDS

**EMERGENCY DEPARTMENT**

EMERGENCY ROOM

[illegible]

EMERGENCY ROOM

DATE	TIME	OBSERVATIONS
1714	1714	from support team called
1714	1714	husband here @ scene - notified
1714	1714	accident by Corbin
1714	1714	from support team here @ husband at family

PATIENT CARE PROGRESS NOTES (ED)

91-I

**Appendix J:**

**NASS CDS OCCUPANT ASSESSMENT FORM:**

**VEHICLE #2 DRIVER**





## OCCUPANT ASSESSMENT FORM

1. Primary Sampling Unit Number

10

2. Case Number - Stratum

9505

3. Vehicle Number

02

4. Occupant Number

01

### OCCUPANT'S CHARACTERISTICS

5. Occupant's Age

45

Code actual age at time of accident.

(00) Less than one year old (specify by month):

(97) 97 years and older

(99) Unknown

6. Occupant's Sex

2

(1) Male

(2) Female-not reported pregnant

(3) Female-pregnant-1st trimester(1st-3rd month)

(4) Female-pregnant-2nd trimester(4th-6th month)

(5) Female-pregnant-3rd trimester(7th-9th month)

(6) Female-pregnant-term unknown

(9) Unknown

7. Occupant's Height

160

Code actual height to the nearest  
centimeter.

(999) Unknown

63 inches X 2.54 = 160 centimeters

8. Occupant's Weight

050

Code actual weight to the nearest  
kilogram.

(999) Unknown

110 pounds X .4536 = 49.89 kilograms

9. Occupant's Role

1

(1) Driver

(2) Passenger

(9) Unknown

### OCCUPANT'S SEATING

10. Occupant's Seat Position

11

Front Seat

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify):

(15) On or in the lap of another occupant

Second Seat

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify):

(25) On or in the lap of another occupant

Third Seat

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify):

(35) On or in the lap of another occupant

Fourth Seat

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify):

(45) On or in the lap of another occupant

(97) In or on unenclosed area

(98) Other seat (specify):

(99) Unknown

11. Occupant's Posture

0

(0) Normal posture

Abnormal posture

(1) Kneeling or standing on seat

(2) Lying on or across seat

(3) Kneeling, standing or sitting in front of seat

(4) Sitting sideways or turned to talk with another  
occupant or to look out a rear window

(5) Sitting on a console

(6) Lying back in a reclined seat position

(7) Bracing with feet or hands on a surface in front  
of seat

(8) Other abnormal posture (specify):

(9) Unknown

## EJECTION/ENTRAPMENT

12. Ejection 0

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

13. Ejection Area 0

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)  
(specify): \_\_\_\_\_
- (9) Unknown

14. Ejection Medium 0

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): \_\_\_\_\_
- (5) Integral structure
- (8) Other medium (specify): \_\_\_\_\_
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) 0

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment 0

- (0) Not entrapped/exit not inhibited
- (1) Entrapped/pinned - mechanically restrained
- (2) Could not exit vehicle due to jammed doors, fire, etc.  
(specify): \_\_\_\_\_
- (9) Unknown

17. Occupant Mobility 4

- (0) Occupant fatal before removed from vehicle
- (1) Removed from vehicle while unconscious or disoriented
- (2) Removed from vehicle due to injuries
- (3) Exited vehicle with some assistance
- (4) Exited vehicle under own power
- (5) Occupant fully ejected
- (9) Unknown

## BELT SYSTEM FUNCTION

<p>18. Manual (Active) Belt System Availability <u>0</u></p> <p>(0) None available</p> <p>(1) Belt removed/destroyed</p> <p>(2) Shoulder belt</p> <p>(3) Lap belt</p> <p>(4) Lap and shoulder belt</p> <p>(5) Belt available—type unknown</p> <p><i>Integral Belt Partially Destroyed</i></p> <p>(6) Shoulder belt (lap belt destroyed/removed)</p> <p>(7) Lap belt (shoulder belt destroyed/removed)</p> <p>(8) Other belt (specify): _____</p> <p>(9) Unknown _____</p> <p>19. Manual (Active) Belt System Use <u>00</u></p> <p>(00) None used, not available, or belt removed/destroyed</p> <p>(01) Inoperative (specify): _____</p> <p>(02) Shoulder belt _____</p> <p>(03) Lap belt _____</p> <p>(04) Lap and shoulder belt _____</p> <p>(05) Belt used—type unknown _____</p> <p>(08) Other belt used (specify): _____</p> <p>(12) Shoulder belt used with child safety seat _____</p> <p>(13) Lap belt used with child safety seat _____</p> <p>(14) Lap and shoulder belt used with child safety seat _____</p> <p>(15) Belt used with child safety seat—type unknown _____</p> <p>(18) Other belt used with child safety seat (specify): _____</p> <p>(99) Unknown if belt used _____</p> <p>20. Proper Use of Manual (Active) Belts <u>0</u></p> <p>(0) None used or not available</p> <p>(1) Belt used properly</p> <p>(2) Belt used properly with child safety seat</p> <p><i>Belt Used Improperly</i></p> <p>(3) Shoulder belt worn under arm</p> <p>(4) Shoulder belt worn behind back or seat</p> <p>(5) Belt worn around more than one person</p> <p>(6) Lap belt worn on abdomen</p> <p>(7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____</p> <p>(8) Other improper use of manual belt system (specify): _____</p> <p>(9) Unknown _____</p> <p>21. Manual (Active) Belt Failure Modes <u>0</u></p> <p>During Accident</p> <p>(0) No manual belt used or not available</p> <p>(1) No manual belt failure(s)</p> <p>(2) Torn webbing (stretched webbing not included)</p> <p>(3) Broken buckle or latchplate</p> <p>(4) Upper anchorage separated</p> <p>(5) Other anchorage separated (specify): _____</p> <p>(6) Broken retractor _____</p> <p>(7) Combination of above (specify): _____</p> <p>(8) Other manual belt failure (specify): _____</p> <p>(9) Unknown _____</p>	<p>22. Shoulder Belt Upper Anchorage Adjustment <u>9</u></p> <p>(0) No shoulder belt</p> <p>(1) No upper anchorage adjustment for shoulder belt</p> <p><i>Adjustable shoulder Belt Upper Anchorage</i></p> <p>(2) In full up position</p> <p>(3) In mid position</p> <p>(4) In full down position</p> <p>(5) Position unknown</p> <p>(9) Unknown if position has adjustable upper anchorage adjustment</p> <p>23. Automatic (Passive) Belt System Availability/Function <u>2</u></p> <p>(0) Not equipped/not available</p> <p>(1) 2 point automatic belts</p> <p>(2) 3 point automatic belts</p> <p>(3) Automatic belts - type unknown</p> <p><i>Non-functional</i></p> <p>(4) Automatic belts destroyed or rendered inoperative</p> <p>(9) Unknown _____</p> <p>24. Automatic (Passive) Belt System Use <u>1</u></p> <p>(0) Not equipped/not available/destroyed or rendered inoperative</p> <p>(1) Automatic belt in use</p> <p>(2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): _____</p> <p>(3) Automatic belt use unknown _____</p> <p>(9) Unknown _____</p> <p>25. Automatic (Passive) Belt System Type <u>1</u></p> <p>(0) Not equipped/not available</p> <p>(1) Non-motorized system</p> <p>(2) Motorized system</p> <p>(9) Unknown _____</p> <p>26. Proper Use of Automatic (Passive) Belt System <u>1</u></p> <p>(0) Not equipped/not available/not used</p> <p>(1) Automatic belt used properly</p> <p>(2) Automatic belt used properly with child safety seat</p> <p><i>Automatic Belt Used Improperly</i></p> <p>(3) Automatic shoulder belt worn under arm</p> <p>(4) Automatic shoulder belt worn behind back</p> <p>(5) Automatic belt worn around more than one person</p> <p>(6) Lap portion of automatic belt worn on abdomen</p> <p>(7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): _____</p> <p>(8) Other improper use of automatic belt system (specify): _____</p> <p>(9) Unknown _____</p> <p>27. Automatic (Passive) Belt Failure Modes <u>9</u></p> <p>During Accident</p> <p>(0) Not equipped/not available/not in use</p> <p>(1) No automatic belt failure(s)</p> <p>(2) Torn webbing (stretched webbing not included)</p> <p>(3) Broken buckle or latchplate</p> <p>(4) Upper anchorage separated</p> <p>(5) Other anchorage separated (specify): _____</p> <p>(6) Broken retractor _____</p> <p>(7) Combination of above (specify): _____</p> <p>(8) Other automatic belt failure (specify): _____</p> <p>(9) Unknown _____</p>
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POLICE REPORTED RESTRAINT USE	AIR BAG SYSTEM FUNCTION
<p>28. Police Reported Belt Use <u>5</u></p> <p>(0) None used</p> <p>(1) Police did not indicate belt use</p> <p>(2) Shoulder belt</p> <p>(3) Lap belt</p> <p>(4) Lap and shoulder belt</p> <p>(5) Belt used, type not specified</p> <p>(6) Child safety seat</p> <p>(7) Automatic belt</p> <p>(8) Other type belt, (specify): _____</p> <p>(9) Police indicated "unknown" _____</p>	<p>30. Frontal Air Bag System Availability/Function (This Occupant Position) <u>1</u></p> <p>(0) Not equipped/not available</p> <p>(1) Air bag</p> <p><i>Non-functional</i></p> <p>(2) Air bag disconnected (specify): _____</p> <p>(3) Air bag not reinstalled</p> <p>(9) Unknown</p>
<p>29. Police Reported Air Bag Availability/Function <u>1</u></p> <p>(0) No air bag available</p> <p>(1) Police did not indicate air bag availability/function</p> <p>(2) Deployed</p> <p>(3) Not deployed</p> <p>(4) Unknown if deployed</p> <p>(9) Police indicated "unknown"</p>	<p>31. Frontal Air Bag System Deployment (This Occupant Position) <u>7</u></p> <p>(0) Not equipped/not available</p> <p>(1) Deployed during accident (as a result of impact)</p> <p>(2) Deployed inadvertently just prior to accident</p> <p>(3) Deployed, details unknown</p> <p>(4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)</p> <p>(5) Unknown if deployed</p> <p>(7) Nondeployed</p> <p>(9) Unknown</p>
<p>Check the Primary Source Used In Determining Belt Use.</p> <p>[ ] Not equipped/not available/destroyed or rendered inoperative</p> <p>[ ] Vehicle inspection</p> <p>[ ] Official injury data</p> <p>[X] Driver/occupant interview</p> <p>[ ] Other (specify): _____</p> <p>[ ] Unknown if belt used _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) <u>0</u></p> <p>(0) Not equipped/not available</p> <p>(1) Air bag</p> <p><i>Non-functional</i></p> <p>(2) Air bag disconnected (specify): _____</p> <p>(3) Air bag not reinstalled</p> <p>(9) Unknown</p> <p><i>Specify type of "other" air bag present:</i> _____</p>
	<p>33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) <u>0</u></p> <p>(0) Not equipped with an "other" air bag</p> <p>(1) Deployed during accident (as a result of impact)</p> <p>(2) Deployed inadvertently just prior to accident</p> <p>(3) Deployed, details unknown</p> <p>(4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)</p> <p>(5) Unknown if deployed</p> <p>(7) Nondeployed</p> <p>(9) Unknown</p>
	<p>34. Are There Indications of Air Bag System Failure? (This Occupant Position) <u>1</u></p> <p>(0) Not equipped/not available</p> <p>(1) No</p> <p>(2) Yes (specify): _____</p> <p>(9) Unknown _____</p>

## FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION

35. Had Vehicle Been in Previous Accident(s)? 9

(0) Not equipped/not available

(1) No previous accidents

Yes

(2) Previous accident(s) without deployment(s)

(3) One previous accident with deployment

(4) More than one previous accident with at least one deployment

(8) Previous accidents, unknown deployment status

(9) Unknown

*Rental Car*36. Type of Air Bag 1

(0) Not equipped/not available

(1) Original manufacturer installed system

(2) Retrofitted air bag

(3) Replacement air bag

(8) Unknown type of air bag

(9) Unknown

37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? 9

(0) Not equipped/not available

(1) No prior maintenance

(2) Yes, prior maintenance (specify):

(9) Unknown

*Rental Car*38. Air Bag Deployment Accident Event Sequence Number 9 7

(00) Not equipped/not available

Code the accident event sequence number that initiated the air bag deployment

(96) Deployed, unknown event

(97) Not deployed

(98) Unknown if deployed

(99) Unknown

39. CDC For Air Bag Deployment Impact 7

(0) Not equipped/not available

(1) Highest delta V

(2) Second highest delta V

(3) Other non-coded delta V (specify):

(6) Deployed, unknown event

(7) Not deployed

(8) Unknown if deployed

(9) Unknown

40. Longitudinal Component of + 9 9 7

Delta V For Air Bag

Deployment Impact

(\_000) Not equipped/not available

Code the value of the delta V for the impact that initiated the air bag deployment

(\_996) Deployment, unknown longitudinal Delta V

(\_997) Not deployed

(\_998) Unknown if deployed

(\_999) Unknown

41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? 7

(0) Not equipped/not available

(1) No

(2) Yes

(3) Deployed, unknown if flap(s) opened at designated tear points

(7) Not deployed

(8) Unknown if deployed

(9) Unknown

42. Were Air Bag Module Cover Flap(s) Damaged? 7

(0) Not equipped/not available

(1) No

(2) Yes (specify):

(3) Deployed, unknown if air bag module cover flap(s) damaged

(7) Not deployed

(8) Unknown if deployed

(9) Unknown

43. Was There Damage To The Air Bag? 9 7

(00) Not equipped/not available

(01) Not damaged

Yes - Air Bag Damage

(02) Ruptured

(03) Cut

(04) Torn

(05) Holed

(06) Burned

(07) Abraded

(88) Other damage (specify):

(95) Damaged, details unknown

(96) Deployed, unknown if damaged

(97) Not deployed

(98) Unknown if deployed

(99) Unknown

**FIRST SEAT FRONTAL AIR BAG SYSTEM  
EVALUATION** *continued***HEAD RESTRAINT AND SEAT EVALUATION**44. Source of Air Bag Damage 9 7

- (00) Not equipped/not available  
 (01) Not damaged  
 (02) Object worn by occupant, (specify):

(03) Object carried by occupant, (specify):

(04) Adaptive/assistive controls, (specify):

- (05) Fire in vehicle  
 (06) Thermal burns  
 (07) Rescue or emergency efforts  
 (88) Other damage source (specify):

- (95) Damaged, unknown source  
 (96) Deployed, unknown if damaged  
 (97) Not deployed  
 (98) Unknown if deployed  
 (99) Unknown

45. Was The Air Bag Tethered? 7

- (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify number of tether straps):

- (3) Deployed, unknown if tethered  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

46. Did The Air Bag Have Vent Ports? 7

- (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify number of vent ports):

- (3) Deployed, unknown if vent ports present  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

47. Was the Air Bag in this Occupant's Position Contacted by Another Occupant? 7

- (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify):

- (3) Deployed, unknown if other occupant contact to air bag  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

48. Was This Occupant Wearing Eye-wear? 7

- (0) Not equipped/not available  
 (1) No  
 (2) Eyeglasses/sunglasses  
 (3) Contact lenses  
 (4) Deployed, unknown if eyewear worn  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

49. Head Restraint Type/Damage by Occupant at This Occupant Position 9

- (0) No head restraints  
 (1) Integral—no damage  
 (2) Integral—damaged during accident  
 (3) Adjustable—no damage  
 (4) Adjustable—damaged during accident  
 (5) Add-on—no damage  
 (6) Add-on—damaged during accident  
 (8) Other (specify):

(9) Unknown

50. Seat Type (this Occupant Position) 9 9

- (00) Occupant not seated or no seat  
 (01) Bucket  
 (02) Bucket with folding back  
 (03) Bench  
 (04) Bench with separate back cushions  
 (05) Bench with folding back(s)  
 (06) Split bench with separate back cushions  
 (07) Split bench with folding back(s)  
 (08) Pedestal (i.e., column supported)  
 (09) Box mounted seat (i.e., van type)  
 (10) Other seat type (specify):

(99) Unknown

51. Seat Orientation (this Occupant Position) 9

- (0) Occupant not seated or no seat  
 (1) Forward facing seat  
 (2) Rear facing seat  
 (3) Side facing seat (inward)  
 (4) Side facing seat (outward)  
 (8) Other (specify):

(9) Unknown

52. Seat Track Adjusted Position Prior To Impact 3

- (0) Occupant not seated or no seat  
 (1) Non-adjustable seat track

*Adjustable Seat Track*

- (2) Seat at forward most track position  
 (3) Seat between forward most and middle track positions  
 (4) Seat at middle track position  
 (5) Seat between middle and rear most track positions  
 (6) Seat at rear most track position  
 (9) Unknown

HEAD RESTRAINT AND SEAT EVALUATION *continued*53. Seat Back Incline Prior and Post Impact 13

- (00) Occupant not seated or no seat  
 (01) Not adjustable

*Upright prior to impact*

- (11) Moved to completely rearward position  
 (12) Moved to rearward midrange position  
 (13) Moved to slightly rearward position  
 (14) Retained pre-impact position  
 (15) Moved to slightly forward position  
 (16) Moved to forward midrange position  
 (17) Moved to completely forward position

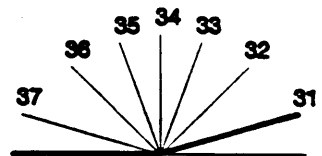
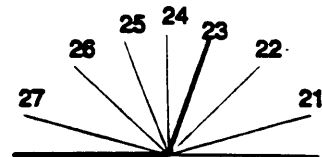
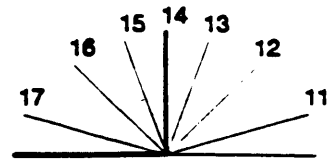
*Slightly reclined prior to impact*

- (21) Moved to completely rearward position  
 (22) Moved to rearward midrange position  
 (23) Retained pre-impact position  
 (24) Moved to upright position  
 (25) Moved to slightly forward position  
 (26) Moved to forward midrange position  
 (27) Moved to completely forward position

*Completely reclined prior to impact*

- (31) Retained pre-impact position  
 (32) Moved to rearward midrange position  
 (33) Moved to slightly rearward position  
 (34) Moved to upright position  
 (35) Moved to slightly forward position  
 (36) Moved to forward midrange position  
 (37) Moved to completely forward position

(99) Unknown

54. Seat Performance (this Occupant Position) 9

- (0) Occupant not seated or no seat  
 (1) No seat performance failure(s)  
 (2) Seat adjusters failed  
 (3) Seat back folding locks or "seat back" failed (specify): \_\_\_\_\_  
 (4) Seat track/anchors failed  
 (5) Deformed by impact of occupant  
 (6) Deformed by passenger compartment intrusion, (specify): \_\_\_\_\_  
 (7) Combination of above (specify): \_\_\_\_\_  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

seat anchors broke  
 per interviewee

## CHILD SAFETY SEAT

55. Child Safety Seat Make/Model 000

(000) No child safety seat

Applicable codes are found in your NASS CDS

Data Collection, Coding and Editing

(950) Built-in child safety seat

(997) Other make/model (specify):

(998) Unknown make/model

(999) Unknown if child safety seat used

56. Type of Child Safety Seat 0

(0) No child safety seat

(1) Infant seat

(2) Toddler seat

(3) Convertible seat

(4) Booster seat - with shield

(5) Booster seat - without shield

(7) Other type child safety seat (specify):

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

57. Child Safety Seat Orientation 00

(00) No child safety seat

*Designed for Rear Facing for This Age/Weight*

(01) Rear facing

(02) Forward facing

(08) Other orientation (specify):

(09) Unknown orientation

*Designed For Forward Facing for This Age/Weight*

(11) Rear facing

(12) Forward facing

(18) Other orientation (specify):

(19) Unknown orientation

*Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight*

(21) Rear facing

(22) Forward facing

(28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

58. Child Safety Seat Harness Usage 0059. Child Safety Seat Shield Usage 0060. Child Safety Seat Tether Usage 00Note: Options below applicable to  
Variables OA58-OA60.

(00) No child safety seat

*Not Designed With Harness/Shield/Tether*(01) After market harness/shield/tether  
added, not used

(02) After market harness/shield/tether used

(03) Child safety seat used, but no after market  
harness/shield/tether added(09) Unknown if harness/shield/tether  
added or used*Designed With Harness/Shield/Tether*

(11) Harness/shield/tether not used

(12) Harness/shield/tether used

(19) Unknown if harness/shield/tether used

*Unknown If Designed With Harness/Shield/Tether*

(21) Harness/shield/tether not used

(22) Harness/shield/tether used

(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used



**INJURY CONSEQUENCES****61. Injury Severity (Police Rating)**2

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

**62. Treatment - Mortality**3

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):  
\_\_\_\_\_

*Nonfatal*

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (7) Treatment - other (specify):  
\_\_\_\_\_
- (8) Transported to a medical facility-unknown if treated
- (9) Unknown

**63. Type Of Medical Facility (for Initial Treatment)**1

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):  
\_\_\_\_\_
- (9) Unknown

**64. Hospital Stay**01

- (00) Not Hospitalized
- \_\_\_\_\_ Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

**65. Working Days Lost**05

- \_\_\_\_\_ Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

**STOP WORK HERE****VARIABLES 66-74****TO BE CODED BY THE ZONE CENTER**

**TO BE CODED BY THE ZONE CENTER****INJURY CONSEQUENCES****TRAUMA DATA****66. Time to Death**

Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)

- (00) Not fatal  
(96) Fatal - ruled disease  
(99) Unknown

**67. 1st Medically Reported Cause of Death****68. 2nd Medically Reported Cause of Death****69. 3rd Medically Reported Cause of Death**

Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death

- (00) Not fatal or no additional causes  
(96) Mode of death given but specific injuries are not linked to cause of death. (specify):

(97) Other result (includes fatal ruled disease) (specify):

(99) Unknown

**70. Number of Recorded Injuries for This Occupant**

Code the actual number of injuries recorded for this occupant.

- (00) No recorded injuries  
(97) Injured, details unknown  
(99) Unknown if injured

**71. Glasgow Coma Scale (GCS) Score (at Medical Facility)**

- (00) Not injured  
(01) Injured - not treated at medical facility  
(02) No GCS Score at medical facility  
(03-15) Code the actual value of the initial GCS Score recorded at medical facility.  
(97) Injured, details unknown  
(99) Unknown if injured

**72. Was the Occupant Given Blood?**

- (1) No - blood not given  
(2) Yes - blood given  
(specify units):  
(9) Unknown if blood given

**73. Arterial Blood Gases (ABG) - HCO<sub>3</sub>**

- (00) Not injured  
(01) Injured, ABGs not measured or reported  
(02-50) Code the actual value of the HCO<sub>3</sub>  
(96) ABGs reported, HCO<sub>3</sub> unknown  
(97) Injured, details unknown  
(99) Unknown if injured

**BELT USE DETERMINATION****74. Primary Source of Belt Use Determination**

- (0) Not equipped/not available/destroyed or rendered inoperative  
(1) Vehicle inspection  
(2) Official injury data  
(3) Driver/occupant interview  
(8) Other (specify):  
(9) Unknown if belt used

**Appendix K:**

**NASS CDS OCCUPANT INJURY FORM:**

**VEHICLE #2 DRIVER**



U.S. Department of Transportation  
National Highway Traffic Safety  
Administration

# OCCUPANT INJURY FORM

Form Approved  
O.M.B. No. 2127-0021  
NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number <u>10</u> 2. Case Number - Stratum <u>9505</u>	3. Vehicle Number <u>02</u> 4. Occupant Number <u>01</u>
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**INJURY DATA**

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

Source of Injury Data	A.I.S. - 90						Injury Source	Injury Confidence Level	Direct/Indirect Injury	Occupant Area Intrusion Number	
	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect					
Contusion Kidney 1st	5. <u>7</u>	6. <u>5</u>	7. <u>4</u>	8. <u>16</u>	9. <u>10</u>	10. <u>1</u>	11. <u>9</u>	12. <u>151</u>	13. <u>2</u>	14. <u>1</u>	15. <u>99</u>
Cerebral Stem 2nd	16. <u>7</u>	17. <u>6</u>	18. <u>4</u>	19. <u>02</u>	20. <u>78</u>	21. <u>1</u>	22. <u>6</u>	23. <u>603</u>	24. <u>2</u>	25. <u>3</u>	26. <u>00</u>
Strain R hip 3rd	27. <u>7</u>	28. <u>8</u>	29. <u>4</u>	30. <u>06</u>	31. <u>02</u>	32. <u>1</u>	33. <u>1</u>	34. <u>603</u>	35. <u>2</u>	36. <u>3</u>	37. <u>00</u>
Strain R foot 4th	38. <u>7</u>	39. <u>8</u>	40. <u>4</u>	41. <u>06</u>	42. <u>02</u>	43. <u>1</u>	44. <u>1</u>	45. <u>254</u>	46. <u>3</u>	47. <u>1</u>	48. <u>99</u>
5th	49. <u>  </u>	50. <u>  </u>	51. <u>  </u>	52. <u>  </u>	53. <u>  </u>	54. <u>  </u>	55. <u>  </u>	56. <u>  </u>	57. <u>  </u>	58. <u>  </u>	59. <u>  </u>
6th	60. <u>  </u>	61. <u>  </u>	62. <u>  </u>	63. <u>  </u>	64. <u>  </u>	65. <u>  </u>	66. <u>  </u>	67. <u>  </u>	68. <u>  </u>	69. <u>  </u>	70. <u>  </u>
7th	71. <u>  </u>	72. <u>  </u>	73. <u>  </u>	74. <u>  </u>	75. <u>  </u>	76. <u>  </u>	77. <u>  </u>	78. <u>  </u>	79. <u>  </u>	80. <u>  </u>	81. <u>  </u>
8th	82. <u>  </u>	83. <u>  </u>	84. <u>  </u>	85. <u>  </u>	86. <u>  </u>	87. <u>  </u>	88. <u>  </u>	89. <u>  </u>	90. <u>  </u>	91. <u>  </u>	92. <u>  </u>
9th	93. <u>  </u>	94. <u>  </u>	95. <u>  </u>	96. <u>  </u>	97. <u>  </u>	98. <u>  </u>	99. <u>  </u>	100. <u>  </u>	101. <u>  </u>	102. <u>  </u>	103. <u>  </u>
10th	104. <u>  </u>	105. <u>  </u>	106. <u>  </u>	107. <u>  </u>	108. <u>  </u>	109. <u>  </u>	110. <u>  </u>	111. <u>  </u>	112. <u>  </u>	113. <u>  </u>	114. <u>  </u>

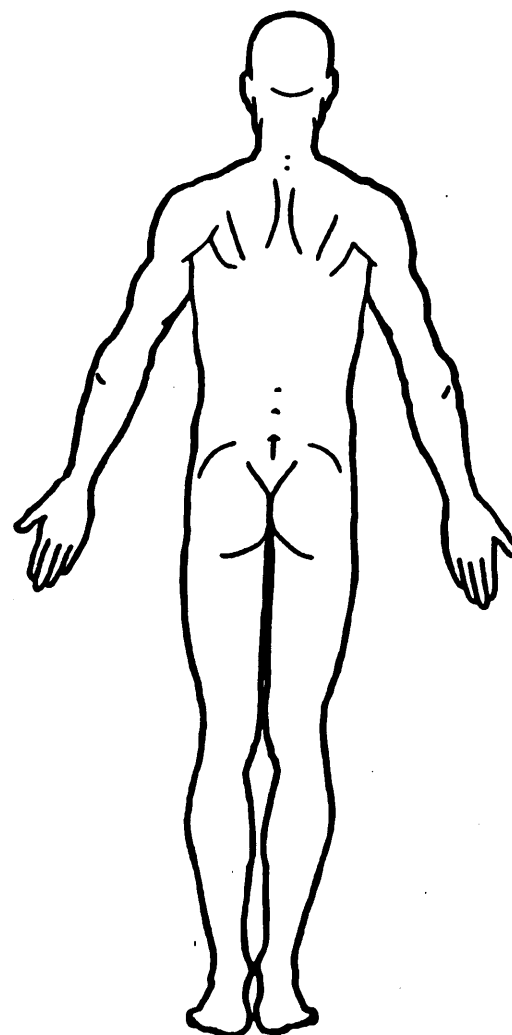
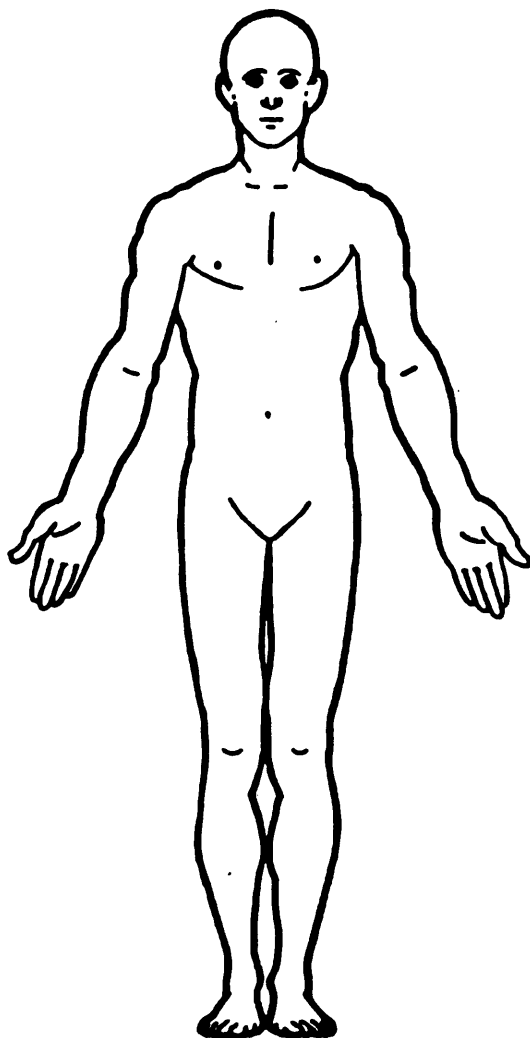
# OCCUPANT INJURY DATA

Source of Injury Data	A.I.S. - 90					Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity					
11th	—	—	—	—	—	—	—	—	—	—
12th	—	—	—	—	—	—	—	—	—	—
13th	—	—	—	—	—	—	—	—	—	—
14th	—	—	—	—	—	—	—	—	—	—
15th	—	—	—	—	—	—	—	—	—	—
16th	—	—	—	—	—	—	—	—	—	—
17th	—	—	—	—	—	—	—	—	—	—
18th	—	—	—	—	—	—	—	—	—	—
19th	—	—	—	—	—	—	—	—	—	—
20th	—	—	—	—	—	—	—	—	—	—
21st	—	—	—	—	—	—	—	—	—	—
22nd	—	—	—	—	—	—	—	—	—	—
23rd	—	—	—	—	—	—	—	—	—	—
24th	—	—	—	—	—	—	—	—	—	—
25th	—	—	—	—	—	—	—	—	—	—

99-K

## OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



<b>Body Region</b>	<b>Specific Anatomic Structure</b>	<b>Level of Injury</b>	<b>Aspect</b>
(1) Head (2) Face (3) Neck (4) Thorax (5) Abdomen (6) Spine (7) Upper Extremity (8) Lower Extremity (9) Unspecified	<u>Vessels, Nerves, Organs.</u> <u>Bones, Joints</u> are assigned consecutive two digit numbers beginning with 02.  The exceptions to this rule apply to:	Specific injuries are assigned consecutive two-digit numbers beginning with 02.  To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.	(1) Right (2) Left (3) Bilateral (4) Central (5) Anterior (6) Posterior (7) Superior (8) Inferior (9) Unknown (0) Whole region
<b>Type of Anatomic Structure</b>	<u>Whole Area</u> (02) Skin - Abrasion (04) Skin - Contusion (06) Skin - Laceration (08) Skin - Avulsion (10) Amputation (20) Burn (30) Crush (40) Degloving (50) Injury - NFS (90) Trauma, other than mechanical  <u>Head - LOC</u> (02) Length of LOC  (04) Level (06) of (08) Consciousness  (10) Concussion  <u>Spine</u> (02) Cervical (04) Thoracic (06) Lumbar	<b>Abbreviated Injury Scale</b>  (1) Minor Injury (2) Moderate Injury (3) Serious Injury (4) Severe Injury (5) Critical Injury (6) Maximum (untreatable) (7) Injured, unknown severity	

SOURCE OF INJURY DATA	INJURY SOURCE CONFIDENCE LEVEL	DIRECT/INDIRECT INJURY
<u>OFFICIAL RECORDS</u> (1) Autopsy records with or without hospital/medical records (2) Hospital/medical records other than emergency room (e.g., discharge summary) (3) Emergency room records only (including associated X-rays or other lab reports) (4) Private physician, walk-in or emergency clinic  <u>UNOFFICIAL RECORDS</u> (5) Lay coroner report (6) E.M.S. personnel (7) Interviewee (8) Other source (specify): _____ (9) Police _____	(1) Certain (2) Probable (3) Possible (9) Unknown	(1) Direct contact injury (2) Indirect contact injury (3) Noncontact injury (7) Injured, unknown source

## INJURY SOURCES

## FRONT

- (001) Windshield
- (002) Mirror
- (003) Sunvisor
- (004) Steering wheel rim
- (005) Steering wheel hub/spoke
- (006) Steering wheel (combination of codes 004 and 005)
- (007) Steering column, transmission selector lever, other attachment
- (008) Cellular telephone or CB radio
- (009) Add on equipment (e.g., tape deck, air conditioner)
- (010) Left instrument panel and below
- (011) Center instrument panel and below
- (012) Right instrument panel and below
- (013) Glove compartment door
- (014) Knee bolster
- (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (017) Windshield reinforced by exterior object (specify): \_\_\_\_\_
- (019) Other front object (specify): \_\_\_\_\_

## LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests
- (052) Left side hardware or armrest
- (053) Left A (A1/A2)-pillar
- (054) Left B-pillar
- (055) Other left pillar (specify): \_\_\_\_\_
- (056) Left side window glass
- (057) Left side window frame
- (058) Left side window sill
- (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (060) Other left side object (specify): \_\_\_\_\_

## RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests

- (102) Right side hardware or armrest
- (103) Right A (A1/A2)-pillar
- (104) Right B-pillar
- (105) Other right pillar (specify): \_\_\_\_\_
- (106) Right side window glass
- (107) Right side window frame
- (108) Right side window sill
- (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (110) Other right side object (specify): \_\_\_\_\_

## INTERIOR

- (151) Seat, back support
- (152) Belt restraint webbing/buckle
- (153) Belt restraint B-pillar or door frame attachment point
- (154) Other restraint system component (specify): \_\_\_\_\_
- (155) Head restraint system
- (160) Other occupants (specify): \_\_\_\_\_
- (161) Interior loose objects
- (162) Child safety seat (specify): \_\_\_\_\_
- (163) Other interior object (specify): \_\_\_\_\_

## AIR BAG

- (170) Air bag-driver side
- (171) Air bag-driver side and eyewear
- (172) Air bag-driver side and jewelry
- (173) Air bag-driver side and object held
- (174) Air bag-driver side and object in mouth
- (175) Air bag compartment cover-driver side
- (176) Air bag compartment cover-driver side and eyewear
- (177) Air bag compartment cover-driver side and jewelry
- (178) Air bag compartment cover-driver side and object held
- (179) Air bag compartment cover-driver side and object in mouth
- (180) Air bag-passenger side
- (181) Air bag-passenger side and eyewear
- (182) Air bag-passenger side and jewelry

- (183) Air bag-passenger side and object held
- (184) Air bag-passenger side and object in mouth
- (185) Air bag compartment cover-passenger side
- (186) Air bag compartment cover-passenger side and eyewear
- (187) Air bag compartment cover-passenger side and jewelry
- (188) Air bag compartment cover-passenger side and object held
- (189) Air bag compartment cover-passenger side and object in mouth
- (190) Other air bag (specify): \_\_\_\_\_
- (195) Other air bag compartment cover (specify): \_\_\_\_\_

## ROOF

- (201) Front header
- (202) Rear header
- (203) Roof left side rail
- (204) Roof right side rail
- (205) Roof or convertible top

## FLOOR

- (251) Floor (including toe pan)
- (252) Floor or console mounted transmission lever, including console
- (253) Parking brake handle
- (254) Foot controls including parking brake

## REAR

- (301) Backlight (rear window)
- (302) Backlight storage rack, door, etc.
- (303) Other rear object (specify): \_\_\_\_\_

## ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration
- (402) Steering control devices (attached to OEM steering wheel)
- (403) Steering knob attached to steering wheel
- (405) Replacement steering wheel (i.e., reduced diameter)
- (406) Joy stick steering controls
- (407) Wheelchair tie-downs
- (408) Modification to seat belts, (specify): \_\_\_\_\_
- (409) Additional or relocated switches, (specify): \_\_\_\_\_

- (410) Raised roof

- (411) Wall mounted head rest (used behind wheel chair)
- (412) Other adaptive device (specify): \_\_\_\_\_

## EXTERIOR OF OCCUPANT'S VEHICLE

- (451) Hood
- (452) Outside hardware (e.g., outside mirror, antenna)
- (453) Other exterior surface or tires (specify): \_\_\_\_\_
- (454) Unknown exterior objects

## EXTERIOR OF OTHER MOTOR VEHICLE

- (501) Front bumper
- (502) Hood edge
- (503) Other front of vehicle (specify): \_\_\_\_\_
- (504) Hood
- (505) Hood ornament
- (506) Windshield, roof rail, A-pillar
- (507) Side surface
- (508) Side mirrors
- (509) Other side protrusions (specify): \_\_\_\_\_
- (510) Rear surface
- (511) Undercarriage
- (512) Tires and wheels
- (513) Other exterior of other motor vehicle (specify): \_\_\_\_\_
- (514) Unknown exterior of other motor vehicle

## OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

- (551) Ground
- (598) Other vehicle or object (specify): \_\_\_\_\_
- (599) Unknown vehicle or object

## NONCONTACT INJURY

- (601) Fire in vehicle
- (602) Flying glass
- (603) Other noncontact injury source (specify): \_\_\_\_\_
- (604) Air bag exhaust gases
- (697) Injured, unknown source



# OFFICIAL INJURY DATA — SKELETAL INJURIES

Restrained?

☐ No

☐ Yes

Blood Alcohol  
Level (mg/dl)

BAL = \_\_\_\_

Glasgow Coma  
Scale Score

GCSS = \_\_\_\_

Units of Blood  
Given

Units = \_\_\_\_

Arterial Blood  
Gases

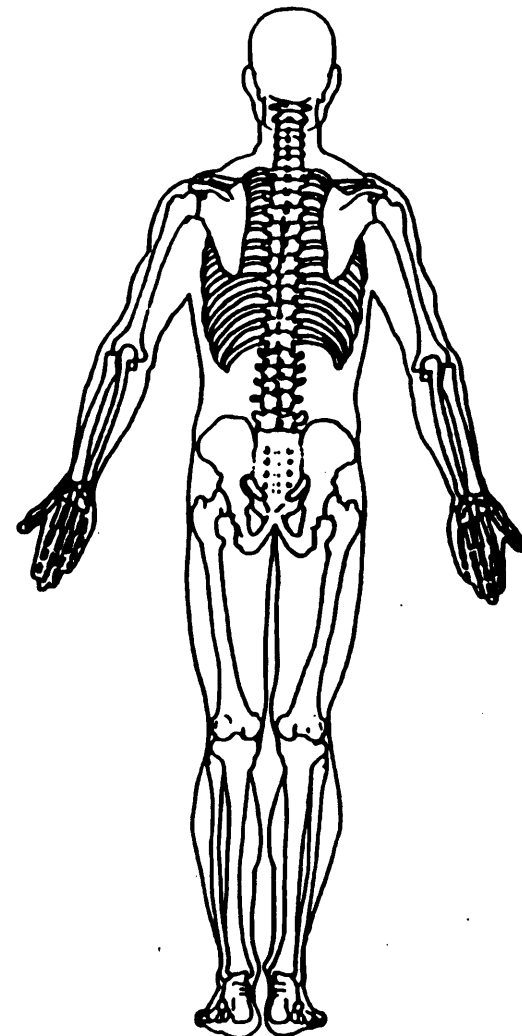
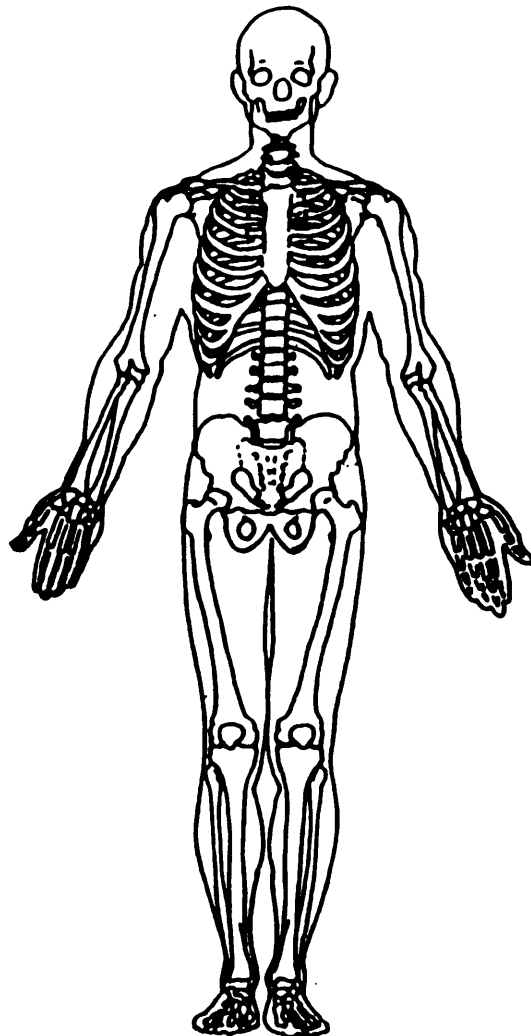
pH = \_\_\_\_

PO<sub>2</sub> = \_\_\_\_

PCO<sub>2</sub> = \_\_\_\_

HCO<sub>3</sub> = \_\_\_\_

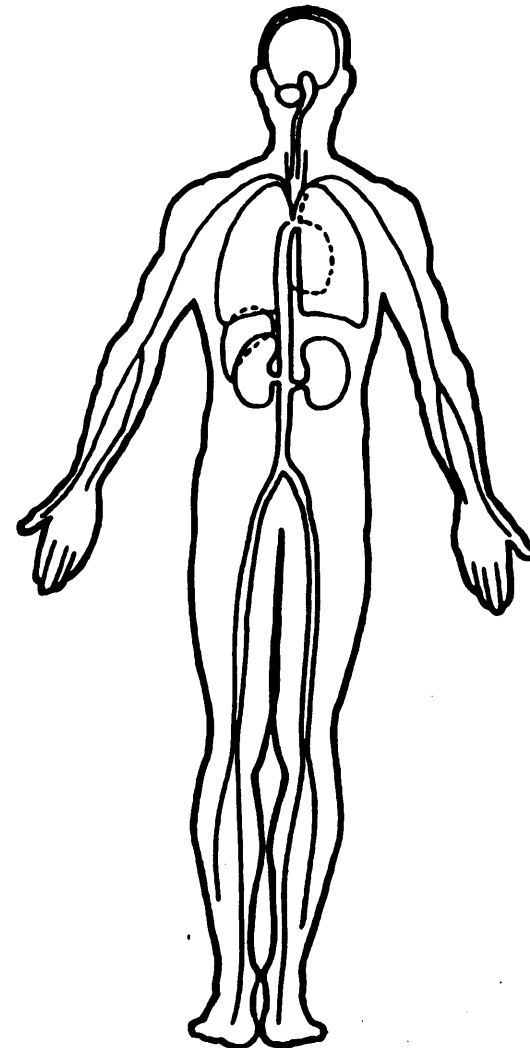
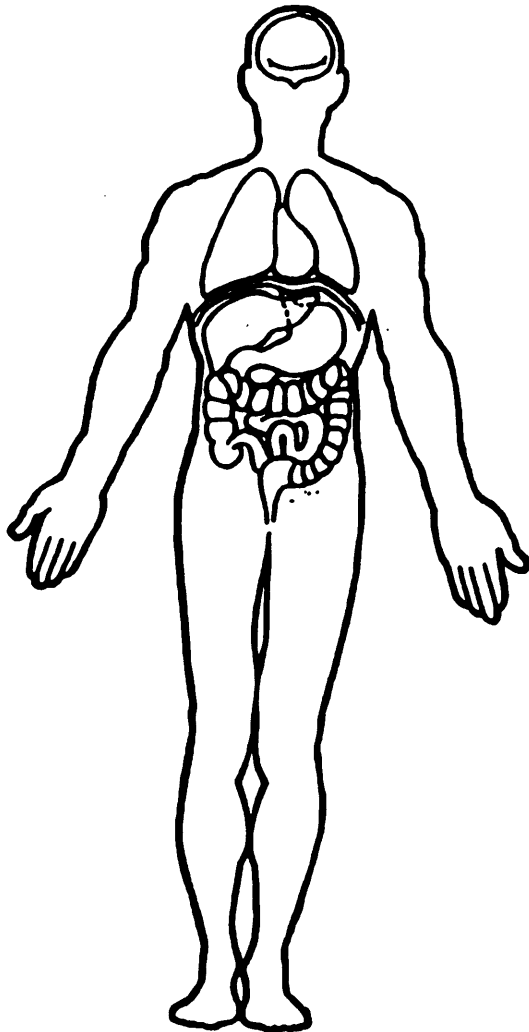
Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



101-K

## OFFICIAL INJURY DATA — INTERNAL INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



## CAUSE OF DEATH

## ICD-9-CM

### OTHER DRUGS (GV16)

Specimen Test Type	Drug(s)	Drug Type
<input type="checkbox"/> Blood and urine tests <input type="checkbox"/> Blood test only <input type="checkbox"/> Urine test only <input type="checkbox"/> Other test <input type="checkbox"/> Unspecified		

### MEDICAL RECORD ABBREVIATIONS

Symbol	Record Type Description
A	Autopsy—medical information based upon an invasive examination of a body
ME	Medical examiner's record—where the information reported on the patient is based on a non-invasive examination of the body
AR	Admission record/summary—any medical information on this record should be considered as post-ER since it summarizes the patient's admission; these records are common in short hospitalizations and usually only contain: admission DX(s), final DX(s), and a listing of surgical treatments; ICD-9-CM codes are frequently available.
FS	Admission/discharge face sheet—face sheets are essentially the same as admission record/summaries and contain the same types of information as discussed above
DS	Discharge summary—shorten history of a patient's hospitalization highlighting the patient's major injuries; this record is often written from the perspective of its author which in many cases is a consultant
OS	Operative record—summary of a performed surgical operation often providing detailed information about a specific trauma; patients who survive the surgery are normally admitted; thus, this record is normally considered post-ER; however, if this record results from an outpatient surgery, then treat it as emergency-room related
PX	Radiographic records—taken after the patient has been admitted, or while in surgery or intensive care
PN	Patient progress notes—supplemental record containing additional nurses notes taken after the patient's admission
HP	History and physical exam—medical history and the results of the physical exam obtained by the emergency room physician assigned to the patient upon arrival at the emergency room
CN	Consultation record—consultations are in essence additional history and physical exams performed by doctors whose expertise was requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission
ER	Emergency room report—where the author of this information is undefined
EN	Emergency room nurse—"nurse/complaint of" section on the emergency room report
ED	Emergency room doctor—"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., doctor portion of emergency room report)
NN	Nurse notes—supplemental record containing additional notes taken by the emergency room nurse(s)
EX	Radiographic records—taken during the patients stay in the emergency room
CV	Coroner's verdict—statement of cause of death for legal specific regarding injuries; care must be exercised to ascertain the credentials of the verdict's author.
CR	Coroner's report—medical information based upon a noninvasive examination performed by a person who is not a doctor but who has the title of a coroner
ET	Emergency medical technician—report by a person who qualifies as an emergency medical services technician (EMS or EMT)
O	Other source—medical information based on an other source (e.g., newspaper, DVM—Doctor of Veterinary Medicine)

**Appendix L:**

**NASS CDS OCCUPANT ASSESSMENT FORM:**

**VEHICLE #2 RIGHT FRONT PASSENGER**



## OCCUPANT ASSESSMENT FORM

OCCUPANT'S SEATING	
1. Primary Sampling Unit Number <u>10</u>	10. Occupant's Seat Position <u>L3</u>
2. Case Number - Stratum <u>9505</u>	<i>Front Seat</i>
3. Vehicle Number <u>02</u>	(11) Left side
4. Occupant Number <u>02</u>	(12) Middle
(13) Right side	
(14) Other (specify): _____	
(15) On or in the lap of another occupant	
<i>Second Seat</i>	
(21) Left side	
(22) Middle	
(23) Right side	
(24) Other (specify): _____	
(25) On or in the lap of another occupant	
<i>Third Seat</i>	
(31) Left side	
(32) Middle	
(33) Right side	
(34) Other (specify): _____	
(35) On or in the lap of another occupant	
<i>Fourth Seat</i>	
(41) Left side	
(42) Middle	
(43) Right side	
(44) Other (specify): _____	
(45) On or in the lap of another occupant	
(97) In or on unenclosed area	
(98) Other seat (specify): _____	
(99) Unknown	
11. Occupant's Posture <u>0</u>	
(0) Normal posture	
<i>Abnormal posture</i>	
(1) Kneeling or standing on seat	
(2) Lying on or across seat	
(3) Kneeling, standing or sitting in front of seat	
(4) Sitting sideways or turned to talk with another occupant or to look out a rear window	
(5) Sitting on a console	
(6) Lying back in a reclined seat position	
(7) Bracing with feet or hands on a surface in front of seat	
(8) Other abnormal posture (specify): _____	
(9) Unknown	

OCCUPANT'S CHARACTERISTICS	
5. Occupant's Age <u>20</u>	
Code actual age at time of accident.	
(00) Less than one year old (specify by month): _____	
(97) 97 years and older	
(99) Unknown	
6. Occupant's Sex <u>2</u>	
(1) Male	
(2) Female-not reported pregnant	
(3) Female-pregnant-1st trimester(1st-3rd month)	
(4) Female-pregnant-2nd trimester(4th-6th month)	
(5) Female-pregnant-3rd trimester(7th-9th month)	
(6) Female-pregnant-term unknown	
(9) Unknown	
7. Occupant's Height <u>173</u>	
Code actual height to the nearest centimeter.	
(999) Unknown	
<u>68</u> inches X 2.54 = <u>172.72</u> centimeters	
8. Occupant's Weight <u>050</u>	
Code actual weight to the nearest kilogram.	
(999)Unknown	
<u>110</u> pounds X .4536 = <u>49.89</u> kilograms	
9. Occupant's Role <u>2</u>	
(1) Driver	
(2) Passenger	
(9) Unknown	

## EJECTION/ENTRAPMENT

12. Ejection 0

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

13. Ejection Area 0

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)  
(specify): \_\_\_\_\_
- (9) Unknown

14. Ejection Medium 0

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): \_\_\_\_\_
- (5) Integral structure
- (8) Other medium (specify): \_\_\_\_\_
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) 0

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment 0

- (0) Not entrapped/exit not inhibited
- (1) Entrapped/pinned - mechanically restrained
- (2) Could not exit vehicle due to jammed doors, fire, etc.  
(specify): \_\_\_\_\_
- (9) Unknown

17. Occupant Mobility 4

- (0) Occupant fatal before removed from vehicle
- (1) Removed from vehicle while unconscious or disoriented
- (2) Removed from vehicle due to injuries
- (3) Exited vehicle with some assistance
- (4) Exited vehicle under own power
- (5) Occupant fully ejected
- (9) Unknown

## BELT SYSTEM FUNCTION

18. Manual (Active) Belt System Availability 0

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

*Integral Belt Partially Destroyed*

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)
- (8) Other belt (specify):

(9) Unknown

19. Manual (Active) Belt System Use 0 0

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify):

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used—type unknown
- (08) Other belt used (specify):

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat—type unknown
- (18) Other belt used with child safety seat (specify):
- (99) Unknown if belt used

20. Proper Use of Manual (Active) Belts 0

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

*Belt Used Improperly*

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of manual belt system (specify):

(9) Unknown

21. Manual (Active) Belt Failure Modes 0

## During Accident

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):

- (6) Broken retractor
- (7) Combination of above (specify):

(8) Other manual belt failure (specify):

(9) Unknown

22. Shoulder Belt Upper Anchorage Adjustment 9

- (0) No shoulder belt
- (1) No upper anchorage adjustment for shoulder belt

*Adjustable shoulder Belt Upper Anchorage*

- (2) In full up position
- (3) In mid position
- (4) In full down position
- (5) Position unknown
- (9) Unknown if position has adjustable upper anchorage adjustment

23. Automatic (Passive) Belt System Availability/Function 2

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

*Non-functional*

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

24. Automatic (Passive) Belt System Use 1

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify):
- (3) Automatic belt use unknown
- (9) Unknown

25. Automatic (Passive) Belt System Type 1

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

26. Proper Use of Automatic (Passive) Belt System 1

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

*Automatic Belt Used Improperly*

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of automatic belt system (specify):

(9) Unknown

27. Automatic (Passive) Belt Failure Modes During Accident 9

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):

- (6) Broken retractor
- (7) Combination of above (specify):
- (8) Other automatic belt failure (specify):

(9) Unknown

POLICE REPORTED RESTRAINT USE	AIR BAG SYSTEM FUNCTION
<p>28. Police Reported Belt Use <u>5</u></p> <p>(0) None used</p> <p>(1) Police did not indicate belt use</p> <p>(2) Shoulder belt</p> <p>(3) Lap belt</p> <p>(4) Lap and shoulder belt</p> <p>(5) Belt used, type not specified</p> <p>(6) Child safety seat</p> <p>(7) Automatic belt</p> <p>(8) Other type belt, (specify): _____</p> <p>(9) Police indicated "unknown" _____</p>	<p>30. Frontal Air Bag System Availability/Function (This Occupant Position) <u>0</u></p> <p>(0) Not equipped/not available</p> <p>(1) Air bag</p> <p><i>Non-functional</i></p> <p>(2) Air bag disconnected (specify): _____</p> <p>(3) Air bag not reinstalled _____</p> <p>(9) Unknown</p>
<p>29. Police Reported Air Bag Availability/Function <u>0</u></p> <p>(0) No air bag available</p> <p>(1) Police did not indicate air bag availability/function</p> <p>(2) Deployed</p> <p>(3) Not deployed</p> <p>(4) Unknown if deployed</p> <p>(9) Police indicated "unknown"</p>	<p>31. Frontal Air Bag System Deployment (This Occupant Position) <u>0</u></p> <p>(0) Not equipped/not available</p> <p>(1) Deployed during accident (as a result of impact)</p> <p>(2) Deployed inadvertently just prior to accident</p> <p>(3) Deployed, details unknown</p> <p>(4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)</p> <p>(5) Unknown if deployed</p> <p>(7) Nondeployed</p> <p>(9) Unknown</p>
<p>Check the Primary Source Used In Determining Belt Use.</p> <p>[ ] Not equipped/not available/destroyed or rendered inoperative</p> <p>[ ] Vehicle inspection</p> <p>[ ] Official injury data</p> <p>[x] Driver/occupant interview</p> <p>[ ] Other (specify): _____</p> <p>[ ] Unknown if belt used _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) <u>0</u></p> <p>(0) Not equipped/not available</p> <p>(1) Air bag</p> <p><i>Non-functional</i></p> <p>(2) Air bag disconnected (specify): _____</p> <p>(3) Air bag not reinstalled _____</p> <p>(9) Unknown</p> <p><i>Specify type of "other" air bag present:</i> _____</p>
	<p>33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) <u>0</u></p> <p>(0) Not equipped with an "other" air bag</p> <p>(1) Deployed during accident (as a result of impact)</p> <p>(2) Deployed inadvertently just prior to accident</p> <p>(3) Deployed, details unknown</p> <p>(4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)</p> <p>(5) Unknown if deployed</p> <p>(7) Nondeployed</p> <p>(9) Unknown</p>
	<p>34. Are There Indications of Air Bag System Failure? (This Occupant Position) <u>0</u></p> <p>(0) Not equipped/not available</p> <p>(1) No</p> <p>(2) Yes (specify): _____</p> <p>(9) Unknown _____</p>



## FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION

35. Had Vehicle Been in Previous Accident(s)? 0  
 (0) Not equipped/not available  
 (1) No previous accidents

Yes

- (2) Previous accident(s) without deployment(s)  
 (3) One previous accident with deployment  
 (4) More than one previous accident with at least one deployment  
 (8) Previous accidents, unknown deployment status  
 (9) Unknown

36. Type of Air Bag 0  
 (0) Not equipped/not available  
 (1) Original manufacturer installed system  
 (2) Retrofitted air bag  
 (3) Replacement air bag  
 (8) Unknown type of air bag  
 (9) Unknown

37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? 0  
 (0) Not equipped/not available  
 (1) No prior maintenance  
 (2) Yes, prior maintenance (specify):  
 \_\_\_\_\_  
 (9) Unknown

38. Air Bag Deployment Accident Event Sequence Number 00  
 (00) Not equipped/not available  
 \_\_\_\_\_ Code the accident event sequence number that initiated the air bag deployment  
 (96) Deployed, unknown event  
 (97) Not deployed  
 (98) Unknown if deployed  
 (99) Unknown

39. CDC For Air Bag Deployment Impact 0  
 (0) Not equipped/not available  
 (1) Highest delta V  
 (2) Second highest delta V  
 (3) Other non-coded delta V (specify):  
 \_\_\_\_\_  
 (6) Deployed, unknown event  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

40. Longitudinal Component of Delta V For Air Bag Deployment Impact + 000  
 (000) Not equipped/not available  
*Code the value of the delta V for the impact that initiated the air bag deployment*  
 (\_996) Deployment, unknown longitudinal Delta V  
 (\_997) Not deployed  
 (\_998) Unknown if deployed  
 (\_999) Unknown

41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? 0  
 (0) Not equipped/not available  
 (1) No  
 (2) Yes  
 (3) Deployed, unknown if flap(s) opened at designated tear points  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

42. Were Air Bag Module Cover Flap(s) Damaged? 0  
 (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify):  
 \_\_\_\_\_  
 (3) Deployed, unknown if air bag module cover flap(s) damaged  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

43. Was There Damage To The Air Bag? 00  
 (00) Not equipped/not available  
 (01) Not damaged

Yes - Air Bag Damage

- (02) Ruptured  
 (03) Cut  
 (04) Torn  
 (05) Holed  
 (06) Burned  
 (07) Abraded  
 (88) Other damage (specify):  
 \_\_\_\_\_  
 (95) Damaged, details unknown  
 (96) Deployed, unknown if damaged  
 (97) Not deployed  
 (98) Unknown if deployed  
 (99) Unknown

FIRST SEAT FRONTAL AIR BAG SYSTEM  
EVALUATION *continued*44. Source of Air Bag Damage 00

- (00) Not equipped/not available  
 (01) Not damaged  
 (02) Object worn by occupant, (specify):

(03) Object carried by occupant, (specify):

(04) Adaptive/assistive controls, (specify):

- (05) Fire in vehicle  
 (06) Thermal burns  
 (07) Rescue or emergency efforts  
 (88) Other damage source (specify):

- (95) Damaged, unknown source  
 (96) Deployed, unknown if damaged  
 (97) Not deployed  
 (98) Unknown if deployed  
 (99) Unknown

45. Was The Air Bag Tethered? 0

- (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify number of tether straps):

- (3) Deployed, unknown if tethered  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

46. Did The Air Bag Have Vent Ports? 0

- (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify number of vent ports):

- (3) Deployed, unknown if vent ports present  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

47. Was the Air Bag in this Occupant's Position Contacted by Another Occupant? 0

- (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify):

- (3) Deployed, unknown if other occupant contact to air bag  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

48. Was This Occupant Wearing Eye-wear? 0

- (0) Not equipped/not available  
 (1) No  
 (2) Eyeglasses/sunglasses  
 (3) Contact lenses  
 (4) Deployed, unknown if eyewear worn  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

## HEAD RESTRAINT AND SEAT EVALUATION

49. Head Restraint Type/Damage by Occupant at This Occupant Position 9

- (0) No head restraints  
 (1) Integral—no damage  
 (2) Integral—damaged during accident  
 (3) Adjustable—no damage  
 (4) Adjustable—damaged during accident  
 (5) Add-on—no damage  
 (6) Add-on—damaged during accident  
 (8) Other (specify):

(9) Unknown

50. Seat Type (this Occupant Position) 99

- (00) Occupant not seated or no seat  
 (01) Bucket  
 (02) Bucket with folding back  
 (03) Bench  
 (04) Bench with separate back cushions  
 (05) Bench with folding back(s)  
 (06) Split bench with separate back cushions  
 (07) Split bench with folding back(s)  
 (08) Pedestal (i.e., column supported)  
 (09) Box mounted seat (i.e., van type)  
 (10) Other seat type (specify):

(99) Unknown

51. Seat Orientation (this Occupant Position) 9

- (0) Occupant not seated or no seat  
 (1) Forward facing seat  
 (2) Rear facing seat  
 (3) Side facing seat (inward)  
 (4) Side facing seat (outward)  
 (8) Other (specify):

(9) Unknown

52. Seat Track Adjusted Position Prior To Impact 4

- (0) Occupant not seated or no seat  
 (1) Non-adjustable seat track

*Adjustable Seat Track*

- (2) Seat at forward most track position  
 (3) Seat between forward most and middle track positions  
 (4) Seat at middle track position  
 (5) Seat between middle and rear most track positions  
 (6) Seat at rear most track position  
 (9) Unknown

**HEAD RESTRAINT AND SEAT EVALUATION** *continued***53. Seat Back Incline Prior and Post Impact** 13

- (00) Occupant not seated or no seat  
 (01) Not adjustable

*Upright prior to impact*

- (11) Moved to completely rearward position  
 (12) Moved to rearward midrange position  
 (13) Moved to slightly rearward position  
 (14) Retained pre-impact position  
 (15) Moved to slightly forward position  
 (16) Moved to forward midrange position  
 (17) Moved to completely forward position

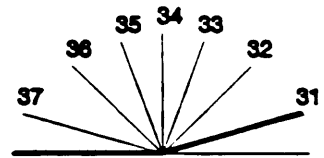
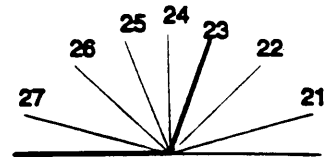
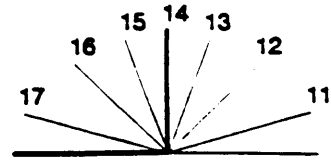
*Slightly reclined prior to impact*

- (21) Moved to completely rearward position  
 (22) Moved to rearward midrange position  
 (23) Retained pre-impact position  
 (24) Moved to upright position  
 (25) Moved to slightly forward position  
 (26) Moved to forward midrange position  
 (27) Moved to completely forward position

*Completely reclined prior to impact*

- (31) Retained pre-impact position  
 (32) Moved to rearward midrange position  
 (33) Moved to slightly rearward position  
 (34) Moved to upright position  
 (35) Moved to slightly forward position  
 (36) Moved to forward midrange position  
 (37) Moved to completely forward position

(99) Unknown

**54. Seat Performance (this Occupant Position)** 9

- (0) Occupant not seated or no seat  
 (1) No seat performance failure(s)  
 (2) Seat adjusters failed  
 (3) Seat back folding locks or "seat back" failed (specify): \_\_\_\_\_  
 (4) Seat track/anchors failed  
 (5) Deformed by impact of occupant  
 (6) Deformed by passenger compartment intrusion, (specify): \_\_\_\_\_  
 (7) Combination of above (specify): \_\_\_\_\_  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

## CHILD SAFETY SEAT

55. Child Safety Seat Make/Model 0 0 0

(000) No child safety seat

Applicable codes are found in your NASS CDS  
Data Collection, Coding and Editing

(950) Built-in child safety seat

(997) Other make/model (specify):

(998) Unknown make/model

(999) Unknown if child safety seat used

56. Type of Child Safety Seat 0

(0) No child safety seat

(1) Infant seat

(2) Toddler seat

(3) Convertible seat

(4) Booster seat - with shield

(5) Booster seat - without shield

(7) Other type child safety seat (specify):

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

57. Child Safety Seat Orientation 0 0

(00) No child safety seat

*Designed for Rear Facing for This Age/Weight*

(01) Rear facing

(02) Forward facing

(08) Other orientation (specify):

(09) Unknown orientation

*Designed For Forward Facing for This Age/Weight*

(11) Rear facing

(12) Forward facing

(18) Other orientation (specify):

(19) Unknown orientation

*Unknown Design or Orientation For This  
Age/Weight, or Unknown Age/Weight*

(21) Rear facing

(22) Forward facing

(28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

58. Child Safety Seat Harness Usage 0 059. Child Safety Seat Shield Usage 0 060. Child Safety Seat Tether Usage 0 0Note: Options below applicable to  
Variables OA58-OA60.

(00) No child safety seat

*Not Designed With Harness/Shield/Tether*(01) After market harness/shield/tether  
added, not used

(02) After market harness/shield/tether used

(03) Child safety seat used, but no after market  
harness/shield/tether added(09) Unknown if harness/shield/tether  
added or used*Designed With Harness/Shield/Tether*

(11) Harness/shield/tether not used

(12) Harness/shield/tether used

(19) Unknown if harness/shield/tether used

*Unknown If Designed With Harness/Shield/Tether*

(21) Harness/shield/tether not used

(22) Harness/shield/tether used

(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

**INJURY CONSEQUENCES****61. Injury Severity (Police Rating)**0

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

**62. Treatment - Mortality**6

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):

*Nonfatal*

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (7) Treatment - other (specify):
- (8) Transported to a medical facility-unknown if treated
- (9) Unknown

**63. Type Of Medical Facility (for Initial Treatment)**5

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):
- (9) Unknown

**64. Hospital Stay**00

- (00) Not Hospitalized
- Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

**65. Working Days Lost**02

- Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

*college***STOP WORK HERE****VARIABLES 66-74****TO BE CODED BY THE ZONE CENTER**

**TO BE CODED BY THE ZONE CENTER****INJURY CONSEQUENCES****TRAUMA DATA**66. Time to Death 00

Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)

- (00) Not fatal  
(96) Fatal - ruled disease  
(99) Unknown

67. 1st Medically Reported Cause of Death 0068. 2nd Medically Reported Cause of Death 0069. 3rd Medically Reported Cause of Death 00

Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death

- (00) Not fatal or no additional causes  
(96) Mode of death given but specific injuries are not linked to cause of death. (specify):

(97) Other result (includes fatal ruled disease) (specify):

(99) Unknown

70. Number of Recorded Injuries for This Occupant 01

Code the actual number of injuries recorded for this occupant.

- (00) No recorded injuries  
(97) Injured, details unknown  
(99) Unknown if injured

71. Glasgow Coma Scale (GCS) Score 02  
(at Medical Facility)

- (00) Not injured  
(01) Injured - not treated at medical facility  
(02) No GCS Score at medical facility  
(03-15) Code the actual value of the initial GCS Score recorded at medical facility.  
(97) Injured, details unknown  
(99) Unknown if injured

72. Was the Occupant Given Blood? 1

- (1) No - blood not given  
(2) Yes - blood given  
(specify units):  
(9) Unknown if blood given

73. Arterial Blood Gases (ABG) - HCO<sub>3</sub> 01

- (00) Not injured  
(01) Injured, ABGs not measured or reported  
(02-50) Code the actual value of the HCO<sub>3</sub>  
(96) ABGs reported, HCO<sub>3</sub> unknown  
(97) Injured, details unknown  
(99) Unknown if injured

**BELT USE DETERMINATION**74. Primary Source of Belt Use Determination 3

- (0) Not equipped/not available/destroyed or rendered inoperative  
(1) Vehicle inspection  
(2) Official injury data  
(3) Driver/occupant interview  
(8) Other (specify):  
(9) Unknown if belt used

**Appendix M:**

**NASS CDS OCCUPANT INJURY FORM:**

**VEHICLE #2 RIGHT FRONT PASSENGER**



U.S. Department of Transportation  
National Highway Traffic Safety  
Administration

# OCCUPANT INJURY FORM

Form Approved  
O.M.B. No. 2127-0021  
NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

10

3. Vehicle Number

02

2. Case Number - Stratum

9505

4. Occupant Number

02

## INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

Source of Injury Data	A.I.S. - 90						Injury Source	Injury Confidence Level	Direct/Indirect Injury	Occupant Area Intrusion Number	
	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect					
Cervical 1st	5. <u>7</u>	6. <u>6</u>	7. <u>4</u>	8. <u>02</u>	9. <u>78</u>	10. <u>1</u>	11. <u>6</u>	12. <u>603</u>	13. <u>2</u>	14. <u>3</u>	15. <u>00</u>
2nd	16. ____	17. ____	18. ____	19. ____	20. ____	21. ____	22. ____	23. ____	24. ____	25. ____	26. ____
3rd	27. ____	28. ____	29. ____	30. ____	31. ____	32. ____	33. ____	34. ____	35. ____	36. ____	37. ____
4th	38. ____	39. ____	40. ____	41. ____	42. ____	43. ____	44. ____	45. ____	46. ____	47. ____	48. ____
5th	49. ____	50. ____	51. ____	52. ____	53. ____	54. ____	55. ____	56. ____	57. ____	58. ____	59. ____
6th	60. ____	61. ____	62. ____	63. ____	64. ____	65. ____	66. ____	67. ____	68. ____	69. ____	70. ____
7th	71. ____	72. ____	73. ____	74. ____	75. ____	76. ____	77. ____	78. ____	79. ____	80. ____	81. ____
8th	82. ____	83. ____	84. ____	85. ____	86. ____	87. ____	88. ____	89. ____	90. ____	91. ____	92. ____
9th	93. ____	94. ____	95. ____	96. ____	97. ____	98. ____	99. ____	100. ____	101. ____	102. ____	103. ____
10th	104. ____	105. ____	106. ____	107. ____	108. ____	109. ____	110. ____	111. ____	112. ____	113. ____	114. ____

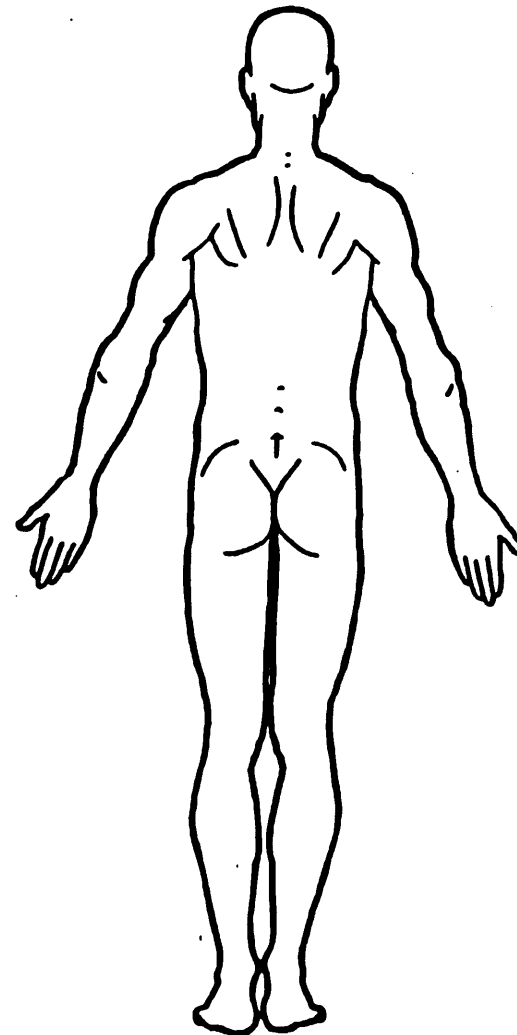
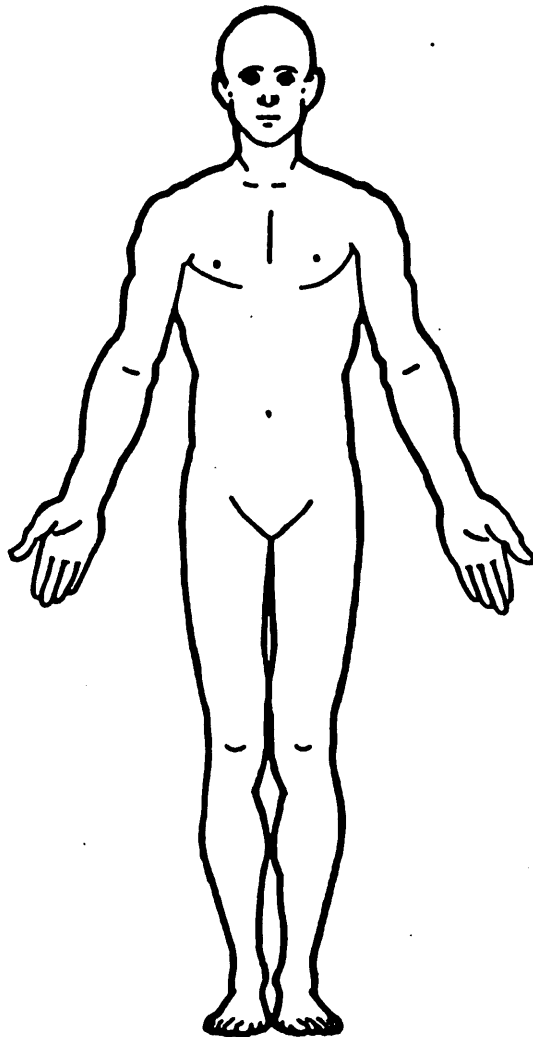


# OCCUPANT INJURY DATA

Source of Injury Data	A.I.S. - 90						Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect				
11th	—	—	—	—	—	—	—	—	—	—
12th	—	—	—	—	—	—	—	—	—	—
13th	—	—	—	—	—	—	—	—	—	—
14th	—	—	—	—	—	—	—	—	—	—
15th	—	—	—	—	—	—	—	—	—	—
16th	—	—	—	—	—	—	—	—	—	—
17th	—	—	—	—	—	—	—	—	—	—
18th	—	—	—	—	—	—	—	—	—	—
19th	—	—	—	—	—	—	—	—	—	—
20th	—	—	—	—	—	—	—	—	—	—
21st	—	—	—	—	—	—	—	—	—	—
22nd	—	—	—	—	—	—	—	—	—	—
23rd	—	—	—	—	—	—	—	—	—	—
24th	—	—	—	—	—	—	—	—	—	—
25th	—	—	—	—	—	—	—	—	—	—

## OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



## OCCUPANT INJURY CLASSIFICATION

Body Region	Specific Anatomic Structure	Level of Injury	Aspect
(1) Head		Specific injuries are assigned consecutive	(1) Right
(2) Face		two-digit numbers beginning with 02.	(2) Left
(3) Neck	<u>Vessels, Nerves, Organs.</u>		(3) Bilateral
(4) Thorax	<u>Bones, Joints</u> are assigned consecutive two digit numbers beginning with 02.	To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.	(4) Central
(5) Abdomen			(5) Anterior
(6) Spine			(6) Posterior
(7) Upper Extremity			(7) Superior
(8) Lower Extremity			(8) Inferior
(9) Unspecified	The exceptions to this rule apply to:		(9) Unknown
			(0) Whole region
<b>Type of Anatomic Structure</b>	<u>Whole Area</u>		
(1) Whole Area	(02) Skin - Abrasion		
(2) Vessels	(04) Skin - Contusion		
(3) Nerves	(06) Skin - Laceration		
(4) Organs (includes Muscles/ligaments)	(08) Skin - Avulsion		
(5) Skeletal (includes joints)	(10) Amputation		
(6) Head - LOC	(20) Burn		
(9) Skin	(30) Crush		
	(40) Degloving		
	(50) Injury - NFS		
	(90) Trauma, other than mechanical		
	<u>Head - LOC</u>		
	(02) Length of LOC		
	(04) Level		
	(06) of		
	(08) Consciousness		
	(10) Concussion		
	<u>Spine</u>		
	(02) Cervical		
	(04) Thoracic		
	(06) Lumbar		
		<b>Abbreviated Injury Scale</b>	
		(1) Minor Injury	
		(2) Moderate Injury	
		(3) Serious Injury	
		(4) Severe Injury	
		(5) Critical Injury	
		(6) Maximum (untreatable)	
		(7) Injured, unknown severity	

## SOURCE OF INJURY DATA

## INJURY SOURCE

## DIRECT/INDIRECT INJURY

## CONFIDENCE LEVEL

OFFICIAL RECORDS

- (1) Autopsy records with or without hospital/medical records
- (2) Hospital/medical records other than emergency room (e.g., discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

UNOFFICIAL RECORDS

- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify): \_\_\_\_\_
- (9) Police

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

# OFFICIAL INJURY DATA — SKELETAL INJURIES

Restrained?

\_\_\_ No

\_\_\_ Yes

Blood Alcohol  
Level (mg/dl)

BAL = \_\_\_

Glasgow Coma  
Scale Score

GCSS = \_\_\_

Units of Blood  
Given

Units = \_\_\_

Arterial Blood  
Gases

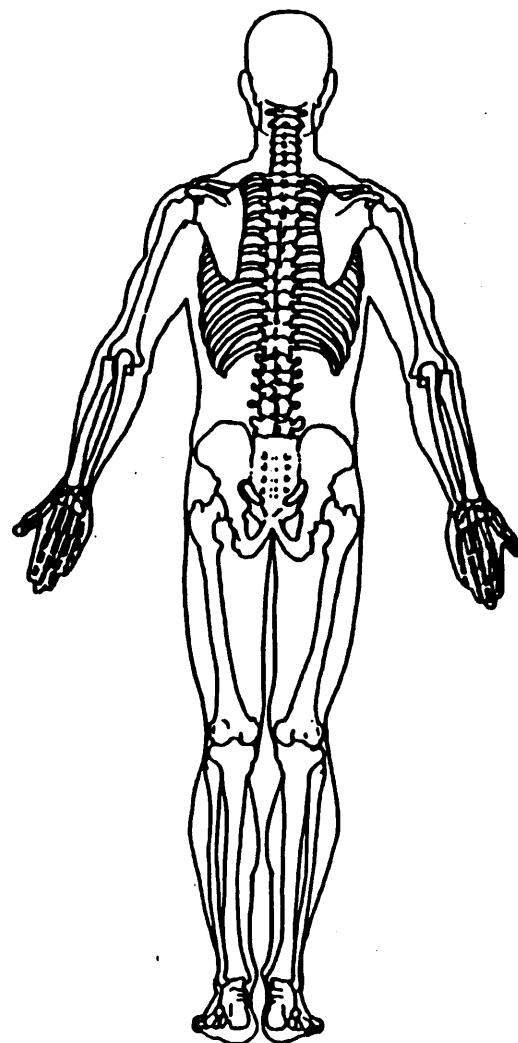
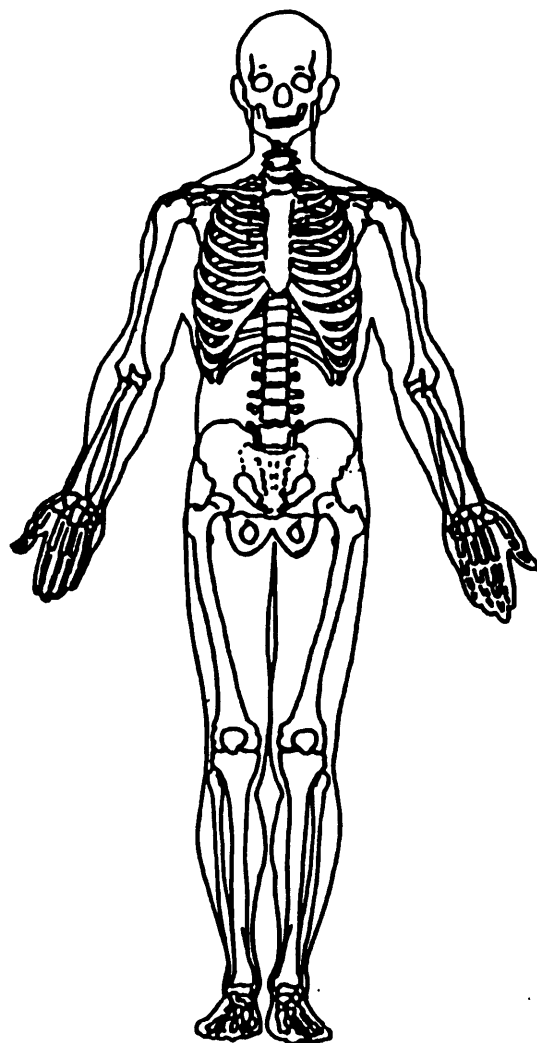
pH = \_\_\_

PO<sub>2</sub> = \_\_\_

PCO<sub>2</sub> = \_\_\_

HCO<sub>3</sub> = \_\_\_

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



111

# INJURY SOURCES

## FRONT

- (001) Windshield
- (002) Mirror
- (003) Sunvisor
- (004) Steering wheel rim
- (005) Steering wheel hub/spoke
- (006) Steering wheel (combination of codes 004 and 005)
- (007) Steering column, transmission selector lever, other attachment
- (008) Cellular telephone or CB radio
- (009) Add on equipment (e.g., tape deck, air conditioner)
- (010) Left instrument panel and below
- (011) Center instrument panel and below
- (012) Right instrument panel and below
- (013) Glove compartment door
- (014) Knee bolster
- (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (017) Windshield reinforced by exterior object (specify): \_\_\_\_\_
- (019) Other front object (specify): \_\_\_\_\_

## LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests
- (052) Left side hardware or armrest
- (053) Left A (A1/A2)-pillar
- (054) Left B-pillar
- (055) Other left pillar (specify): \_\_\_\_\_
- (056) Left side window glass
- (057) Left side window frame
- (058) Left side window sill
- (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (060) Other left side object (specify): \_\_\_\_\_

## RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests

- (102) Right side hardware or armrest
- (103) Right A (A1/A2)-pillar
- (104) Right B-pillar
- (105) Other right pillar (specify): \_\_\_\_\_
- (106) Right side window glass
- (107) Right side window frame
- (108) Right side window sill
- (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (110) Other right side object (specify): \_\_\_\_\_

## INTERIOR

- (151) Seat, back support
- (152) Belt restraint webbing/buckle
- (153) Belt restraint B-pillar or door frame attachment point
- (154) Other restraint system component (specify): \_\_\_\_\_
- (155) Head restraint system
- (160) Other occupants (specify): \_\_\_\_\_
- (161) Interior loose objects
- (162) Child safety seat (specify): \_\_\_\_\_
- (163) Other interior object (specify): \_\_\_\_\_

## AIR BAG

- (170) Air bag-driver side
- (171) Air bag-driver side and eyewear
- (172) Air bag-driver side and jewelry
- (173) Air bag-driver side and object held
- (174) Air bag-driver side and object in mouth
- (175) Air bag compartment cover-driver side
- (176) Air bag compartment cover-driver side and eyewear
- (177) Air bag compartment cover-driver side and jewelry
- (178) Air bag compartment cover-driver side and object held
- (179) Air bag compartment cover-driver side and object in mouth
- (180) Air bag-passenger side
- (181) Air bag-passenger side and eyewear
- (182) Air bag-passenger side and jewelry

- (183) Air bag-passenger side and object held
- (184) Air bag-passenger side and object in mouth
- (185) Air bag compartment cover-passenger side
- (186) Air bag compartment cover-passenger side and eyewear
- (187) Air bag compartment cover-passenger side and jewelry
- (188) Air bag compartment cover-passenger side and object held
- (189) Air bag compartment cover-passenger side and object in mouth
- (190) Other air bag (specify): \_\_\_\_\_
- (195) Other air bag compartment cover (specify): \_\_\_\_\_

## ROOF

- (201) Front header
- (202) Rear header
- (203) Roof left side rail
- (204) Roof right side rail
- (205) Roof or convertible top

## FLOOR

- (251) Floor (including toe pan)
- (252) Floor or console mounted transmission lever, including console
- (253) Parking brake handle
- (254) Foot controls including parking brake

## REAR

- (301) Backlight (rear window)
- (302) Backlight storage rack, door, etc.
- (303) Other rear object (specify): \_\_\_\_\_

## ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration
- (402) Steering control devices (attached to OEM steering wheel)
- (403) Steering knob attached to steering wheel
- (405) Replacement steering wheel (i.e., reduced diameter)
- (406) Joy stick steering controls
- (407) Wheelchair tie-downs
- (408) Modification to seat belts, (specify): \_\_\_\_\_
- (409) Additional or relocated switches, (specify): \_\_\_\_\_
- (410) Raised roof

- (411) Wall mounted head rest (used behind wheel chair)
- (412) Other adaptive device (specify): \_\_\_\_\_

## EXTERIOR of OCCUPANT'S VEHICLE

- (451) Hood
- (452) Outside hardware (e.g., outside mirror, antenna)
- (453) Other exterior surface or tires (specify): \_\_\_\_\_
- (454) Unknown exterior objects

## EXTERIOR OF OTHER MOTOR VEHICLE

- (501) Front bumper
- (502) Hood edge
- (503) Other front of vehicle (specify): \_\_\_\_\_
- (504) Hood
- (505) Hood ornament
- (506) Windshield, roof rail, A-pillar
- (507) Side surface
- (508) Side mirrors
- (509) Other side protrusions (specify): \_\_\_\_\_
- (510) Rear surface
- (511) Undercarriage
- (512) Tires and wheels
- (513) Other exterior of other motor vehicle (specify): \_\_\_\_\_
- (514) Unknown exterior of other motor vehicle

## OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

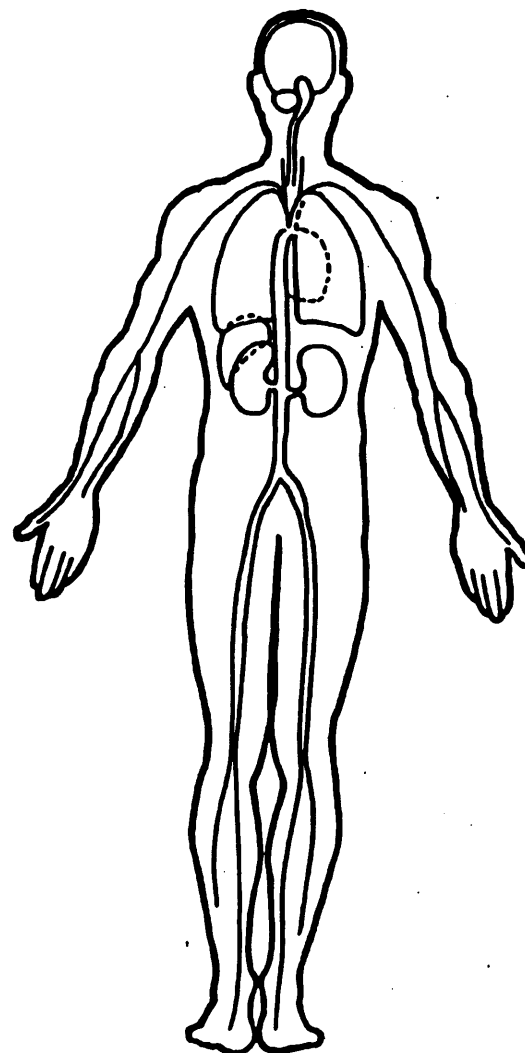
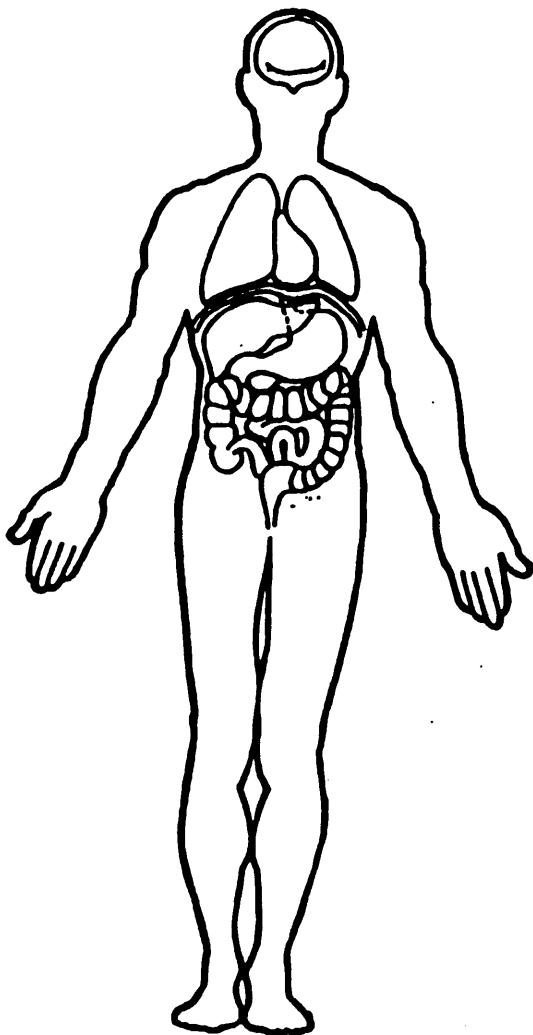
- (551) Ground
- (598) Other vehicle or object (specify): \_\_\_\_\_
- (599) Unknown vehicle or object

## NONCONTACT INJURY

- (601) Fire in vehicle
- (602) Flying glass
- (603) Other noncontact injury source (specify): \_\_\_\_\_
- (604) Air bag exhaust gases
- (697) Injured, unknown source

## OFFICIAL INJURY DATA — INTERNAL INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



# CAUSE OF DEATH

## ICD-9-CM

### OTHER DRUGS (GV16)

Specimen Test Type	Drug(s)	Drug Type
<input type="checkbox"/> Blood and urine tests <input type="checkbox"/> Blood test only <input type="checkbox"/> Urine test only <input type="checkbox"/> Other test <input type="checkbox"/> Unspecified		

### MEDICAL RECORD ABBREVIATIONS

Symbol	Record Type Description
A	Autopsy—medical information based upon an invasive examination of a body
ME	Medical examiner's record—where the information reported on the patient is based on a non-invasive examination of the body
AR	Admission record/summary—any medical information on this record should be considered as post-ER since it summarizes the patient's admission; these records are common in short hospitalizations and usually only contain: admission DX(s), final DX(s), and a listing of surgical treatments; ICD-9-CM codes are frequently available.
FS	Admission/discharge face sheet—face sheets are essentially the same as admission record/summaries and contain the same types of information as discussed above
DS	Discharge summary—shorten history of a patient's hospitalization highlighting the patient's major injuries; this record is often written from the perspective of its author which in many cases is a consultant
OS	Operative record—summary of a performed surgical operation often providing detailed information about a specific trauma; patients who survive the surgery are normally admitted; thus, this record is normally considered post-ER; however, if this record results from an outpatient surgery, then treat it as emergency-room related
PX	Radiographic records—taken after the patient has been admitted, or while in surgery or intensive care
PN	Patient progress notes—supplemental record containing additional nurses notes taken after the patient's admission
HP	History and physical exam—medical history and the results of the physical exam obtained by the emergency room physician assigned to the patient upon arrival at the emergency room
CN	Consultation record—consultations are in essence additional history and physical exams performed by doctors whose expertise was requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission
ER	Emergency room report—where the author of this information is undefined
EN	Emergency room nurse—"nurse/complaint of" section on the emergency room report
ED	Emergency room doctor—"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., doctor portion of emergency room report)
NN	Nurse notes—supplemental record containing additional notes taken by the emergency room nurse(s)
EX	Radiographic records—taken during the patients stay in the emergency room
CV	Coroner's verdict—statement of cause of death for legal specific regarding injuries; care must be exercised to ascertain the credentials of the verdict's author.
CR	Coroner's report—medical information based upon a noninvasive examination performed by a person who is not a doctor but who has the title of a coroner
ET	Emergency medical technician—report by a person who qualifies as an emergency medical services technician (EMS or EMT)
O	Other source—medical information based on an other source (e.g., newspaper, DVM—Doctor of Veterinary Medicine)

**Appendix N:**

**NASS CDS OCCUPANT ASSESSMENT FORM:**

**VEHICLE #2 LEFT REAR PASSENGER**





# OCCUPANT ASSESSMENT FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

4. Occupant Number

## OCCUPANT'S CHARACTERISTICS

5. Occupant's Age

Code actual age at time of accident.

(00) Less than one year old (specify by month):

(97) 97 years and older

(99) Unknown

6. Occupant's Sex

(1) Male

(2) Female-not reported pregnant

(3) Female-pregnant-1st trimester(1st-3rd month)

(4) Female-pregnant-2nd trimester(4th-6th month)

(5) Female-pregnant-3rd trimester(7th-9th month)

(6) Female-pregnant-term unknown

(9) Unknown

7. Occupant's Height

Code actual height to the nearest  
centimeter.

(999) Unknown

61 inches X 2.54 = 154.9 centimeters

8. Occupant's Weight

Code actual weight to the nearest  
kilogram.

(999) Unknown

100 pounds X .4536 = \_\_\_\_\_ kilograms

9. Occupant's Role

(1) Driver

(2) Passenger

(9) Unknown

## OCCUPANT'S SEATING

10. Occupant's Seat Position

*Front Seat*

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify): \_\_\_\_\_

(15) On or in the lap of another occupant

*Second Seat*

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify): \_\_\_\_\_

(25) On or in the lap of another occupant

*Third Seat*

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify): \_\_\_\_\_

(35) On or in the lap of another occupant

*Fourth Seat*

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify): \_\_\_\_\_

(45) On or in the lap of another occupant

(97) In or on unenclosed area

(98) Other seat (specify): \_\_\_\_\_

(99) Unknown

11. Occupant's Posture

(0) Normal posture

*Abnormal posture*

(1) Kneeling or standing on seat

(2) Lying on or across seat

(3) Kneeling, standing or sitting in front of seat

(4) Sitting sideways or turned to talk with another  
occupant or to look out a rear window

(5) Sitting on a console

(6) Lying back in a reclined seat position

(7) Bracing with feet or hands on a surface in front  
of seat

(8) Other abnormal posture (specify): \_\_\_\_\_

(9) Unknown

## EJECTION/ENTRAPMENT

12. Ejection 0

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

13. Ejection Area 0

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)  
(specify): \_\_\_\_\_
- (9) Unknown

14. Ejection Medium 0

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): \_\_\_\_\_
- (5) Integral structure
- (8) Other medium (specify): \_\_\_\_\_
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) 0

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment 0

- (0) Not entrapped/exit not inhibited
- (1) Entrapped/pinned - mechanically restrained
- (2) Could not exit vehicle due to jammed doors, fire, etc.  
(specify): \_\_\_\_\_
- (9) Unknown

17. Occupant Mobility 3

- (0) Occupant fatal before removed from vehicle
- (1) Removed from vehicle while unconscious or disoriented
- (2) Removed from vehicle due to injuries
- (3) Exited vehicle with some assistance
- (4) Exited vehicle under own power
- (5) Occupant fully ejected
- (9) Unknown

## BELT SYSTEM FUNCTION

18. Manual (Active) Belt System Availability 4

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

*Integral Belt Partially Destroyed*

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)
- (8) Other belt (specify):

(9) Unknown

19. Manual (Active) Belt System Use 04

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify):

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used—type unknown
- (08) Other belt used (specify):

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat—type unknown
- (18) Other belt used with child safety seat (specify):
- (99) Unknown if belt used

20. Proper Use of Manual (Active) Belts 9

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

*Belt Used Improperly*

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of manual belt system (specify):

(9) Unknown

21. Manual (Active) Belt Failure Modes During Accident 9

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):

(6) Broken retractor

(7) Combination of above (specify):

(8) Other manual belt failure (specify):

(9) Unknown

22. Shoulder Belt Upper Anchorage Adjustment 9

- (0) No shoulder belt
- (1) No upper anchorage adjustment for shoulder belt

*Adjustable shoulder Belt Upper Anchorage*

- (2) In full up position
- (3) In mid position
- (4) In full down position
- (5) Position unknown
- (9) Unknown if position has adjustable upper anchorage adjustment

23. Automatic (Passive) Belt System Availability/Function 0

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

*Non-functional*

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

24. Automatic (Passive) Belt System Use 0

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify):
- (3) Automatic belt use unknown
- (9) Unknown

25. Automatic (Passive) Belt System Type 0

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

26. Proper Use of Automatic (Passive) Belt System 0

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

*Automatic Belt Used Improperly*

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of automatic belt system (specify):

(9) Unknown

27. Automatic (Passive) Belt Failure Modes During Accident 0

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):

(6) Broken retractor

(7) Combination of above (specify):

(8) Other automatic belt failure (specify):

(9) Unknown

POLICE REPORTED RESTRAINT USE	AIR BAG SYSTEM FUNCTION
<p>28. Police Reported Belt Use <u>5</u></p> <p>(0) None used            (1) Police did not indicate belt use            (2) Shoulder belt            (3) Lap belt            (4) Lap and shoulder belt            (5) Belt used, type not specified            (6) Child safety seat            (7) Automatic belt            (8) Other type belt, (specify):            (9) <u>Police indicated "unknown"</u></p> <p>29. Police Reported Air Bag Availability/Function <u>①</u></p> <p>(0) No air bag available            (1) Police did not indicate air bag availability/function            (2) Deployed            (3) Not deployed            (4) Unknown if deployed            (9) Police indicated "unknown"</p>	<p>30. Frontal Air Bag System Availability/Function (This Occupant Position) <u>0</u></p> <p>(0) Not equipped/not available            (1) Air bag</p> <p><i>Non-functional</i>            (2) Air bag disconnected (specify):            (3) <u>Air bag not reinstalled</u>            (9) Unknown</p> <p>31. Frontal Air Bag System Deployment (This Occupant Position) <u>0</u></p> <p>(0) Not equipped/not available            (1) Deployed during accident (as a result of impact)            (2) Deployed inadvertently just prior to accident            (3) Deployed, details unknown            (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)            (5) Unknown if deployed            (7) Nondeployed            (9) Unknown</p>
<p>Check the Primary Source Used In Determining Belt Use.</p> <p>[ ] Not equipped/not available/destroyed or rendered inoperative            [ ] Vehicle inspection            [ ] Official injury data  <input checked="" type="checkbox"/> Driver/occupant interview            [ ] Other (specify):            [ ] <u>Unknown if belt used</u></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) <u>0</u></p> <p>(0) Not equipped/not available            (1) Air bag</p> <p><i>Non-functional</i>            (2) Air bag disconnected (specify):            (3) <u>Air bag not reinstalled</u>            (9) Unknown</p> <p><i>Specify type of "other" air bag present:</i>            _____</p> <p>33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) <u>0</u></p> <p>(0) Not equipped with an "other" air bag            (1) Deployed during accident (as a result of impact)            (2) Deployed inadvertently just prior to accident            (3) Deployed, details unknown            (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)            (5) Unknown if deployed            (7) Nondeployed            (9) Unknown</p> <p>34. Are There Indications of Air Bag System Failure? (This Occupant Position) <u>0</u></p> <p>(0) Not equipped/not available            (1) No            (2) Yes (specify):            (9) <u>Unknown</u></p>

## FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION

35. Had Vehicle Been in Previous Accident(s)? 0

- (0) Not equipped/not available  
(1) No previous accidents

Yes

- (2) Previous accident(s) without deployment(s)  
(3) One previous accident with deployment  
(4) More than one previous accident with at least one deployment  
(8) Previous accidents, unknown deployment status  
(9) Unknown

36. Type of Air Bag 0

- (0) Not equipped/not available  
(1) Original manufacturer installed system  
(2) Retrofitted air bag  
(3) Replacement air bag  
(8) Unknown type of air bag  
(9) Unknown

37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? 0

- (0) Not equipped/not available  
(1) No prior maintenance  
(2) Yes, prior maintenance (specify): \_\_\_\_\_  
(9) Unknown

38. Air Bag Deployment Accident Event Sequence Number 00

- (00) Not equipped/not available  
\_\_\_\_\_ Code the accident event sequence number that initiated the air bag deployment  
(96) Deployed, unknown event  
(97) Not deployed  
(98) Unknown if deployed  
(99) Unknown

39. CDC For Air Bag Deployment Impact 0

- (0) Not equipped/not available  
(1) Highest delta V  
(2) Second highest delta V  
(3) Other non-coded delta V (specify): \_\_\_\_\_  
(6) Deployed, unknown event  
(7) Not deployed  
(8) Unknown if deployed  
(9) Unknown

40. Longitudinal Component of +Delta V For Air Bag Deployment Impact - 000

- (000) Not equipped/not available  
Code the value of the delta V for the impact that initiated the air bag deployment  
(996) Deployment, unknown longitudinal Delta V  
(997) Not deployed  
(998) Unknown if deployed  
(999) Unknown

41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? 0

- (0) Not equipped/not available  
(1) No  
(2) Yes  
(3) Deployed, unknown if flap(s) opened at designated tear points  
(7) Not deployed  
(8) Unknown if deployed  
(9) Unknown

42. Were Air Bag Module Cover Flap(s) Damaged? 0

- (0) Not equipped/not available  
(1) No  
(2) Yes (specify): \_\_\_\_\_  
(3) Deployed, unknown if air bag module cover flap(s) damaged  
(7) Not deployed  
(8) Unknown if deployed  
(9) Unknown

43. Was There Damage To The Air Bag? 00

- (00) Not equipped/not available  
(01) Not damaged

Yes - Air Bag Damage

- (02) Ruptured  
(03) Cut  
(04) Torn  
(05) Holed  
(06) Burned  
(07) Abraded  
(88) Other damage (specify): \_\_\_\_\_  
(95) Damaged, details unknown  
(96) Deployed, unknown if damaged  
(97) Not deployed  
(98) Unknown if deployed  
(99) Unknown

**FIRST SEAT FRONTAL AIR BAG SYSTEM  
EVALUATION** *continued*

44. Source of Air Bag Damage 00  
 (00) Not equipped/not available  
 (01) Not damaged  
 (02) Object worn by occupant, (specify):  
 (03) Object carried by occupant, (specify):  
 (04) Adaptive/assistive controls, (specify):  
 (05) Fire in vehicle  
 (06) Thermal burns  
 (07) Rescue or emergency efforts  
 (88) Other damage source (specify):  
 (95) Damaged, unknown source  
 (96) Deployed, unknown if damaged  
 (97) Not deployed  
 (98) Unknown if deployed  
 (99) Unknown
45. Was The Air Bag Tethered? 0  
 (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify number of tether straps):  
 (3) Deployed, unknown if tethered  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown
46. Did The Air Bag Have Vent Ports? 0  
 (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify number of vent ports):  
 (3) Deployed, unknown if vent ports present  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown
47. Was the Air Bag in this Occupant's Position Contacted by Another Occupant? 0  
 (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify):  
 (3) Deployed, unknown if other occupant contact to air bag  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown
48. Was This Occupant Wearing Eye-wear? 0  
 (0) Not equipped/not available  
 (1) No  
 (2) Eyeglasses/sunglasses  
 (3) Contact lenses  
 (4) Deployed, unknown if eyewear worn  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

**HEAD RESTRAINT AND SEAT EVALUATION**

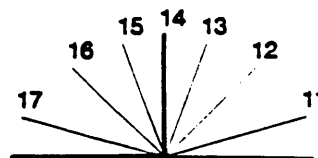
49. Head Restraint Type/Damage by Occupant at This Occupant Position 9  
 (0) No head restraints  
 (1) Integral—no damage  
 (2) Integral—damaged during accident  
 (3) Adjustable—no damage  
 (4) Adjustable—damaged during accident  
 (5) Add-on—no damage  
 (6) Add-on—damaged during accident  
 (8) Other (specify):  
 (9) Unknown
50. Seat Type (this Occupant Position) 99  
 (00) Occupant not seated or no seat  
 (01) Bucket  
 (02) Bucket with folding back  
 (03) Bench  
 (04) Bench with separate back cushions  
 (05) Bench with folding back(s)  
 (06) Split bench with separate back cushions  
 (07) Split bench with folding back(s)  
 (08) Pedestal (i.e., column supported)  
 (09) Box mounted seat (i.e., van type)  
 (10) Other seat type (specify):  
 (99) Unknown
51. Seat Orientation (this Occupant Position) 9  
 (0) Occupant not seated or no seat  
 (1) Forward facing seat  
 (2) Rear facing seat  
 (3) Side facing seat (inward)  
 (4) Side facing seat (outward)  
 (8) Other (specify):  
 (9) Unknown
52. Seat Track Adjusted Position Prior To Impact 1  
 (0) Occupant not seated or no seat  
 (1) Non-adjustable seat track
- Adjustable Seat Track*  
 (2) Seat at forward most track position  
 (3) Seat between forward most and middle track positions  
 (4) Seat at middle track position  
 (5) Seat between middle and rear most track positions  
 (6) Seat at rear most track position  
 (9) Unknown

HEAD RESTRAINT AND SEAT EVALUATION *continued*53. Seat Back Incline Prior and Post Impact 01

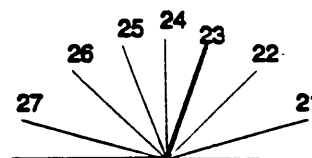
- (00) Occupant not seated or no seat  
 (01) Not adjustable

*Upright prior to impact*

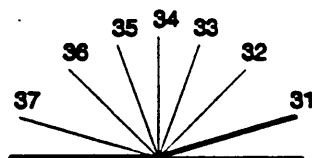
- (11) Moved to completely rearward position  
 (12) Moved to rearward midrange position  
 (13) Moved to slightly rearward position  
 (14) Retained pre-impact position  
 (15) Moved to slightly forward position  
 (16) Moved to forward midrange position  
 (17) Moved to completely forward position

*Slightly reclined prior to impact*

- (21) Moved to completely rearward position  
 (22) Moved to rearward midrange position  
 (23) Retained pre-impact position  
 (24) Moved to upright position  
 (25) Moved to slightly forward position  
 (26) Moved to forward midrange position  
 (27) Moved to completely forward position

*Completely reclined prior to impact*

- (31) Retained pre-impact position  
 (32) Moved to rearward midrange position  
 (33) Moved to slightly rearward position  
 (34) Moved to upright position  
 (35) Moved to slightly forward position  
 (36) Moved to forward midrange position  
 (37) Moved to completely forward position



(99) Unknown

54. Seat Performance (this Occupant Position) 9

- (0) Occupant not seated or no seat  
 (1) No seat performance failure(s)  
 (2) Seat adjusters failed  
 (3) Seat back folding locks or "seat back" failed  
     (specify): \_\_\_\_\_  
 (4) Seat track/anchors failed  
 (5) Deformed by impact of occupant  
 (6) Deformed by passenger compartment  
     intrusion, (specify): \_\_\_\_\_  
 (7) Combination of above (specify): \_\_\_\_\_  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

## CHILD SAFETY SEAT

55. Child Safety Seat Make/Model 000

(000) No child safety seat

Applicable codes are found in your NASS CDS  
Data Collection, Coding and Editing

(950) Built-in child safety seat

(997) Other make/model (specify):  
\_\_\_\_\_

(998) Unknown make/model

(999) Unknown if child safety seat used

56. Type of Child Safety Seat 0

(0) No child safety seat

(1) Infant seat

(2) Toddler seat

(3) Convertible seat

(4) Booster seat - with shield

(5) Booster seat - without shield

(7) Other type child safety seat (specify):  
\_\_\_\_\_

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

57. Child Safety Seat Orientation 00

(00) No child safety seat

*Designed for Rear Facing for This Age/Weight*

(01) Rear facing

(02) Forward facing

(08) Other orientation (specify):  
\_\_\_\_\_

(09) Unknown orientation

*Designed For Forward Facing for This Age/Weight*

(11) Rear facing

(12) Forward facing

(18) Other orientation (specify):  
\_\_\_\_\_

(19) Unknown orientation

*Unknown Design or Orientation For This  
Age/Weight, or Unknown Age/Weight*

(21) Rear facing

(22) Forward facing

(28) Other orientation (specify):  
\_\_\_\_\_

(29) Unknown orientation

(99) Unknown if child safety seat used

58. Child Safety Seat Harness Usage 0059. Child Safety Seat Shield Usage 0060. Child Safety Seat Tether Usage 00Note: Options below applicable to  
Variables OA58-OA60.

(00) No child safety seat

*Not Designed With Harness/Shield/Tether*(01) After market harness/shield/tether  
added, not used

(02) After market harness/shield/tether used

(03) Child safety seat used, but no after market  
harness/shield/tether added(09) Unknown if harness/shield/tether  
added or used*Designed With Harness/Shield/Tether*

(11) Harness/shield/tether not used

(12) Harness/shield/tether used

(19) Unknown if harness/shield/tether used

*Unknown If Designed With Harness/Shield/Tether*

(21) Harness/shield/tether not used

(22) Harness/shield/tether used

(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used



**INJURY CONSEQUENCES****61. Injury Severity (Police Rating)**2

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

**62. Treatment - Mortality**4

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):

*Nonfatal*

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (7) Treatment - other (specify):
- (8) Transported to a medical facility-unknown if treated
- (9) Unknown

**63. Type Of Medical Facility (for Initial Treatment)**1

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):
- (9) Unknown

**64. Hospital Stay**00

- (00) Not Hospitalized
- Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

**65. Working Days Lost**97

- Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

**STOP WORK HERE****VARIABLES 66-74****TO BE CODED BY THE ZONE CENTER**

**TO BE CODED BY THE ZONE CENTER****INJURY CONSEQUENCES****TRAUMA DATA**66. Time to Death 00

Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)

- (00) Not fatal  
(96) Fatal - ruled disease  
(99) Unknown

67. 1st Medically Reported Cause of Death 0068. 2nd Medically Reported Cause of Death 0069. 3rd Medically Reported Cause of Death 00

Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death

- (00) Not fatal or no additional causes  
(96) Mode of death given but specific injuries are not linked to cause of death. (specify):

(97) Other result (includes fatal ruled disease) (specify):

(99) Unknown

70. Number of Recorded Injuries for This Occupant 03

Code the actual number of injuries recorded for this occupant.

- (00) No recorded injuries  
(97) Injured, details unknown  
(99) Unknown if injured

71. Glasgow Coma Scale (GCS) Score 02  
(at Medical Facility)

- (00) Not injured  
(01) Injured - not treated at medical facility  
(02) No GCS Score at medical facility  
(03-15) Code the actual value of the initial GCS Score recorded at medical facility.  
(97) Injured, details unknown  
(99) Unknown if injured

72. Was the Occupant Given Blood? 1

- (1) No - blood not given  
(2) Yes - blood given  
(specify units):  
(9) Unknown if blood given

73. Arterial Blood Gases (ABG) - HCO<sub>3</sub> 01

- (00) Not injured  
(01) Injured, ABGs not measured or reported  
(02-50) Code the actual value of the HCO<sub>3</sub>  
(96) ABGs reported, HCO<sub>3</sub> unknown  
(97) Injured, details unknown  
(99) Unknown if injured

**BELT USE DETERMINATION**74. Primary Source of Belt Use Determination 3

- (0) Not equipped/not available/destroyed or rendered inoperative  
(1) Vehicle inspection  
(2) Official injury data  
(3) Driver/occupant interview  
(8) Other (specify):  
(9) Unknown if belt used

**Appendix O:**

**NASS CDS OCCUPANT INJURY FORM:**

**VEHICLE #2 LEFT REAR PASSENGER**



U.S. Department of Transportation  
National Highway Traffic Safety  
Administration

# OCCUPANT INJURY FORM

Form Approved  
O.M.B. No. 2127-0021  
NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

10

3. Vehicle Number

02

2. Case Number - Stratum

9505

4. Occupant Number

03

## INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

Source of Injury Data	A.I.S. - 90						Injury Source	Injury Confidence Level	Direct/Indirect Injury	Occupant Area Intrusion Number	
	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect					
Cervical 1st Strain	5. <u>7</u>	6. <u>6</u>	7. <u>4</u>	8. <u>02</u>	9. <u>78</u>	10. <u>1</u>	11. <u>6</u>	12. <u>603</u>	13. <u>2</u>	14. <u>3</u>	15. <u>00</u>
Cervical 2nd Knee	16. <u>7</u>	17. <u>8</u>	18. <u>9</u>	19. <u>04</u>	20. <u>02</u>	21. <u>1</u>	22. <u>1</u>	23. <u>151</u>	24. <u>2</u>	25. <u>1</u>	26. <u>99</u>
Spinal 3rd Knee	27. <u>7</u>	28. <u>8</u>	29. <u>5</u>	30. <u>02</u>	31. <u>06</u>	32. <u>1</u>	33. <u>1</u>	34. <u>151</u>	35. <u>2</u>	36. <u>1</u>	37. <u>99</u>
4th	38. <u>  </u>	39. <u>  </u>	40. <u>  </u>	41. <u>  </u>	42. <u>  </u>	43. <u>  </u>	44. <u>  </u>	45. <u>  </u>	46. <u>  </u>	47. <u>  </u>	48. <u>  </u>
5th	49. <u>  </u>	50. <u>  </u>	51. <u>  </u>	52. <u>  </u>	53. <u>  </u>	54. <u>  </u>	55. <u>  </u>	56. <u>  </u>	57. <u>  </u>	58. <u>  </u>	59. <u>  </u>
6th	60. <u>  </u>	61. <u>  </u>	62. <u>  </u>	63. <u>  </u>	64. <u>  </u>	65. <u>  </u>	66. <u>  </u>	67. <u>  </u>	68. <u>  </u>	69. <u>  </u>	70. <u>  </u>
7th	71. <u>  </u>	72. <u>  </u>	73. <u>  </u>	74. <u>  </u>	75. <u>  </u>	76. <u>  </u>	77. <u>  </u>	78. <u>  </u>	79. <u>  </u>	80. <u>  </u>	81. <u>  </u>
8th	82. <u>  </u>	83. <u>  </u>	84. <u>  </u>	85. <u>  </u>	86. <u>  </u>	87. <u>  </u>	88. <u>  </u>	89. <u>  </u>	90. <u>  </u>	91. <u>  </u>	92. <u>  </u>
9th	93. <u>  </u>	94. <u>  </u>	95. <u>  </u>	96. <u>  </u>	97. <u>  </u>	98. <u>  </u>	99. <u>  </u>	100. <u>  </u>	101. <u>  </u>	102. <u>  </u>	103. <u>  </u>
10th	104. <u>  </u>	105. <u>  </u>	106. <u>  </u>	107. <u>  </u>	108. <u>  </u>	109. <u>  </u>	110. <u>  </u>	111. <u>  </u>	112. <u>  </u>	113. <u>  </u>	114. <u>  </u>

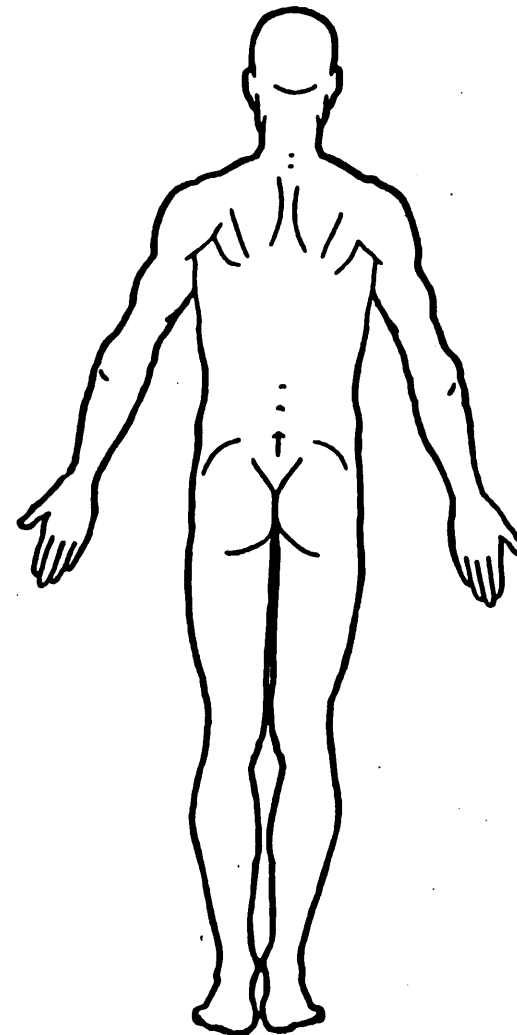
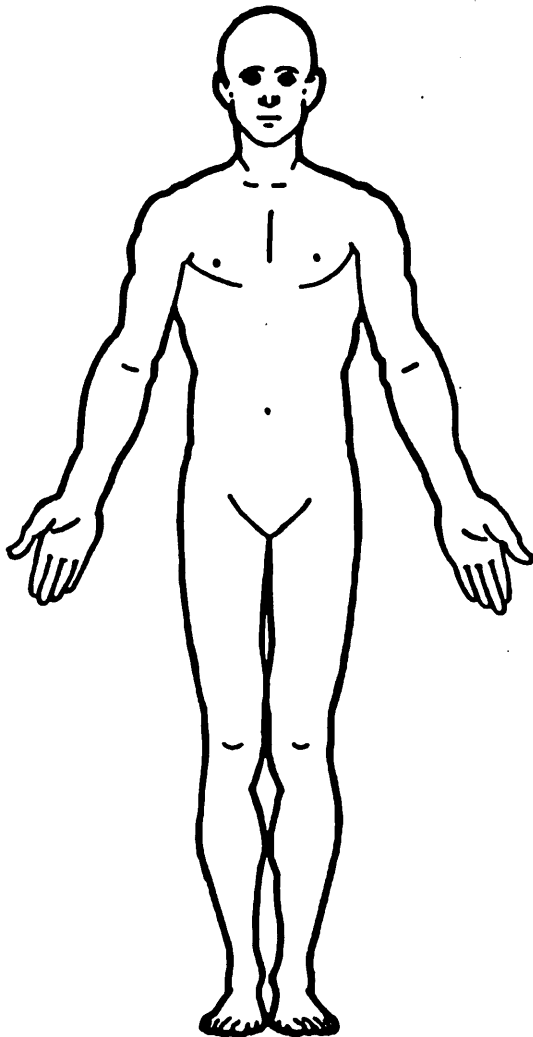
# OCCUPANT INJURY DATA

	Source of Injury Data	A.I.S. - 90					Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
		Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity				
11th	—	—	—	—	—	—	—	—	—	—
12th	—	—	—	—	—	—	—	—	—	—
13th	—	—	—	—	—	—	—	—	—	—
14th	—	—	—	—	—	—	—	—	—	—
15th	—	—	—	—	—	—	—	—	—	—
16th	—	—	—	—	—	—	—	—	—	—
17th	—	—	—	—	—	—	—	—	—	—
18th	—	—	—	—	—	—	—	—	—	—
19th	—	—	—	—	—	—	—	—	—	—
20th	—	—	—	—	—	—	—	—	—	—
21st	—	—	—	—	—	—	—	—	—	—
22nd	—	—	—	—	—	—	—	—	—	—
23rd	—	—	—	—	—	—	—	—	—	—
24th	—	—	—	—	—	—	—	—	—	—
25th	—	—	—	—	—	—	—	—	—	—

121-0

## OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



## OCCUPANT INJURY CLASSIFICATION

Body Region	Specific Anatomic Structure	Level of Injury	Aspect
(1) Head		Specific injuries are assigned consecutive two-digit numbers beginning with 02.	(1) Right
(2) Face			(2) Left
(3) Neck	<u>Vessels, Nerves, Organs.</u>	To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.	(3) Bilateral
(4) Thorax	<u>Bones, Joints</u> are assigned consecutive two digit numbers beginning with 02.		(4) Central
(5) Abdomen		The exceptions to this rule apply to:	(5) Anterior
(6) Spine			(6) Posterior
(7) Upper Extremity			(7) Superior
(8) Lower Extremity			(8) Inferior
(9) Unspecified			(9) Unknown
			(0) Whole region
Type of Anatomic Structure	Whole Area	Abbreviated Injury Scale	
(1) Whole Area	(02) Skin - Abrasion	(1) Minor Injury	
(2) Vessels	(04) Skin - Contusion	(2) Moderate Injury	
(3) Nerves	(06) Skin - Laceration	(3) Serious Injury	
(4) Organs (includes Muscles/ligaments)	(08) Skin - Avulsion	(4) Severe Injury	
(5) Skeletal (includes joints)	(10) Amputation	(5) Critical Injury	
(6) Head - LOC	(20) Burn	(6) Maximum (untreatable)	
(9) Skin	(30) Crush	(7) Injured, unknown severity	
	(40) Degloving		
	(50) Injury - NFS		
	(90) Trauma, other than mechanical		
	<u>Head - LOC</u>		
	(02) Length of LOC		
	(04) Level		
	(06) of		
	(08) Consciousness		
	(10) Concussion		
	<u>Spine</u>		
	(02) Cervical		
	(04) Thoracic		
	(06) Lumbar		

## SOURCE OF INJURY DATA

INJURY SOURCE  
CONFIDENCE LEVEL

## DIRECT/INDIRECT INJURY

OFFICIAL RECORDS

- (1) Autopsy records with or without hospital/medical records
- (2) Hospital/medical records other than emergency room (e.g., discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

UNOFFICIAL RECORDS

- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify): \_\_\_\_\_
- (9) Police

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

# OFFICIAL INJURY DATA — SKELETAL INJURIES

Restrained?

\_\_\_ No

\_\_\_ Yes

Blood Alcohol  
Level (mg/dl)

BAL = \_\_\_

Glasgow Coma  
Scale Score

GCSS = \_\_\_

Units of Blood  
Given

Units = \_\_\_

Arterial Blood  
Gases

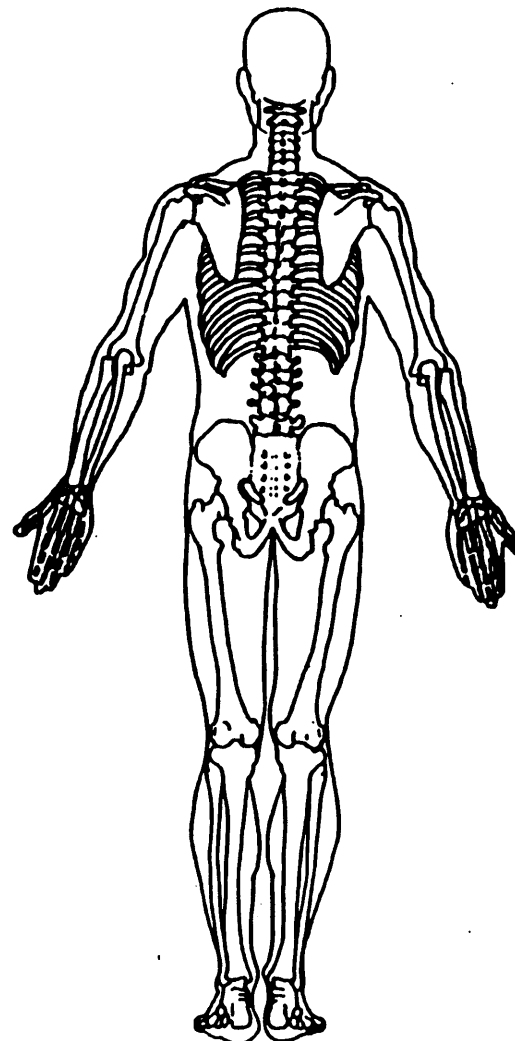
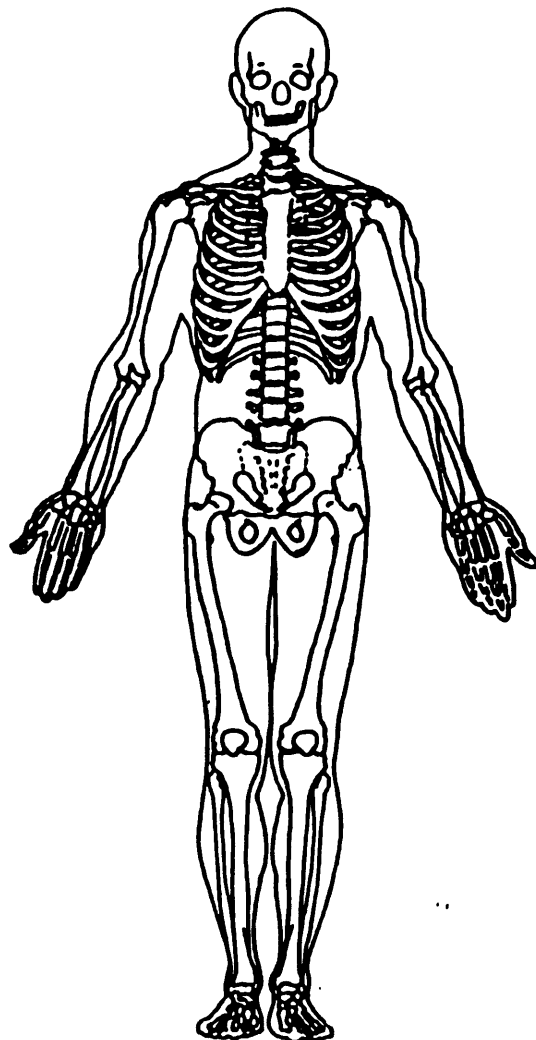
pH = \_\_\_

PO<sub>2</sub> = \_\_\_

PCO<sub>2</sub> = \_\_\_

HCO<sub>3</sub> = \_\_\_

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)





# INJURY SOURCES

## FRONT

- (001) Windshield
- (002) Mirror
- (003) Sunvisor
- (004) Steering wheel rim
- (005) Steering wheel hub/spoke
- (006) Steering wheel (combination of codes 004 and 005)
- (007) Steering column, transmission selector lever, other attachment
- (008) Cellular telephone or CB radio
- (009) Add on equipment (e.g., tape deck, air conditioner)
- (010) Left instrument panel and below
- (011) Center instrument panel and below
- (012) Right instrument panel and below
- (013) Glove compartment door
- (014) Knee bolster
- (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (017) Windshield reinforced by exterior object (specify):

- (019) Other front object (specify):

## LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests
- (052) Left side hardware or armrest
- (053) Left A (A1/A2)-pillar
- (054) Left B-pillar
- (055) Other left pillar (specify):
- (056) Left side window glass
- (057) Left side window frame
- (058) Left side window sill
- (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (060) Other left side object (specify):

## RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests

- (102) Right side hardware or armrest
- (103) Right A (A1/A2)-pillar
- (104) Right B-pillar
- (105) Other right pillar (specify):
- (106) Right side window glass
- (107) Right side window frame
- (108) Right side window sill
- (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (110) Other right side object (specify):

## INTERIOR

- (151) Seat, back support
- (152) Belt restraint webbing/buckle
- (153) Belt restraint B-pillar or door frame attachment point
- (154) Other restraint system component (specify):
- (155) Head restraint system
- (160) Other occupants (specify):
- (161) Interior loose objects
- (162) Child safety seat (specify):
- (163) Other interior object (specify):

## AIR BAG

- (170) Air bag-driver side
- (171) Air bag-driver side and eyewear
- (172) Air bag-driver side and jewelry
- (173) Air bag-driver side and object held
- (174) Air bag-driver side and object in mouth
- (175) Air bag compartment cover-driver side
- (176) Air bag compartment cover-driver side and eyewear
- (177) Air bag compartment cover-driver side and jewelry
- (178) Air bag compartment cover-driver side and object held
- (179) Air bag compartment cover-driver side and object in mouth
- (180) Air bag-passenger side
- (181) Air bag-passenger side and eyewear
- (182) Air bag-passenger side and jewelry

- (183) Air bag-passenger side and object held
- (184) Air bag-passenger side and object in mouth
- (185) Air bag compartment cover-passenger side
- (186) Air bag compartment cover-passenger side and eyewear
- (187) Air bag compartment cover-passenger side and jewelry
- (188) Air bag compartment cover-passenger side and object held
- (189) Air bag compartment cover-passenger side and object in mouth
- (190) Other air bag (specify):
- (195) Other air bag compartment cover (specify):

## ROOF

- (201) Front header
- (202) Rear header
- (203) Roof left side rail
- (204) Roof right side rail
- (205) Roof or convertible top

## FLOOR

- (251) Floor (including toe pan)
- (252) Floor or console mounted transmission lever, including console
- (253) Parking brake handle
- (254) Foot controls including parking brake

## REAR

- (301) Backlight (rear window)
- (302) Backlight storage rack, door, etc.
- (303) Other rear object (specify):

## ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration
- (402) Steering control devices (attached to OEM steering wheel)
- (403) Steering knob attached to steering wheel
- (405) Replacement steering wheel (i.e., reduced diameter)
- (406) Joy stick steering controls
- (407) Wheelchair tie-downs
- (408) Modification to seat belts, (specify):
- (409) Additional or relocated switches, (specify):
- (410) Raised roof

- (411) Wall mounted head rest (used behind wheel chair)
- (412) Other adaptive device (specify):

## EXTERIOR of OCCUPANT'S VEHICLE

- (451) Hood
- (452) Outside hardware (e.g., outside mirror, antenna)
- (453) Other exterior surface or tires (specify):
- (454) Unknown exterior objects

## EXTERIOR of OTHER MOTOR VEHICLE

- (501) Front bumper
- (502) Hood edge
- (503) Other front of vehicle (specify):
- (504) Hood
- (505) Hood ornament
- (506) Windshield, roof rail, A-pillar
- (507) Side surface
- (508) Side mirrors
- (509) Other side protrusions (specify):
- (510) Rear surface
- (511) Undercarriage
- (512) Tires and wheels
- (513) Other exterior of other motor vehicle (specify):
- (514) Unknown exterior of other motor vehicle

## OTHER VEHICLE or OBJECT IN THE ENVIRONMENT

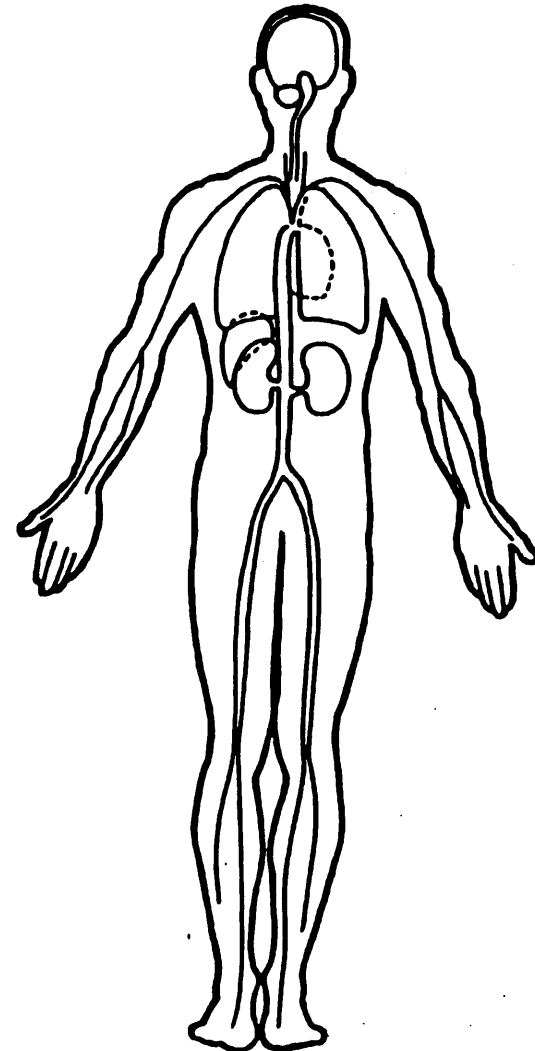
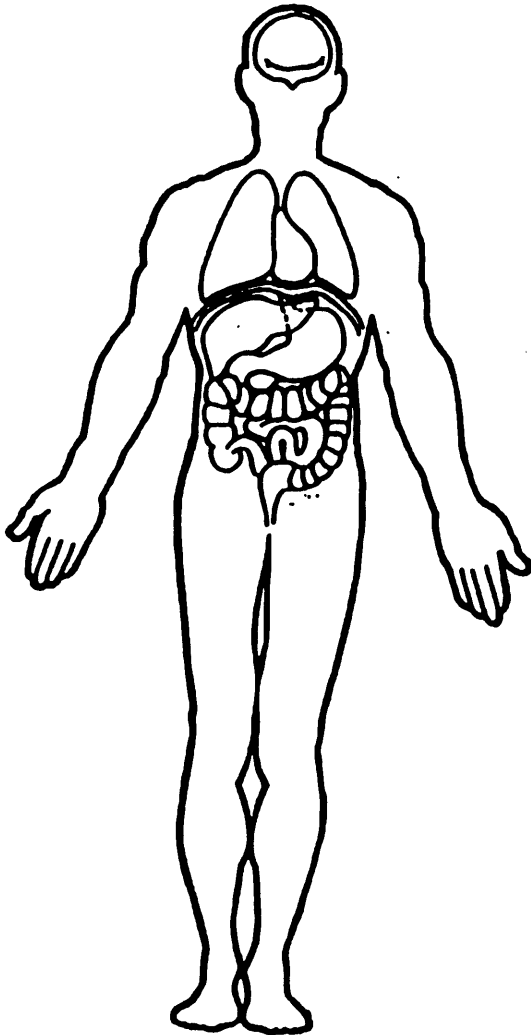
- (551) Ground
- (598) Other vehicle or object (specify):
- (599) Unknown vehicle or object

## NONCONTACT INJURY

- (601) Fire in vehicle
- (602) Flying glass
- (603) Other noncontact injury source (specify):
- (604) Air bag exhaust gases
- (697) Injured, unknown source

## OFFICIAL INJURY DATA — INTERNAL INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



## CAUSE OF DEATH

## ICD-9-CM

### OTHER DRUGS (GV16)

Specimen Test Type	Drug(s)	Drug Type
<input type="checkbox"/> Blood and urine tests <input type="checkbox"/> Blood test only <input type="checkbox"/> Urine test only <input type="checkbox"/> Other test <input type="checkbox"/> Unspecified		

### MEDICAL RECORD ABBREVIATIONS

Symbol	Record Type Description
<b>A</b>	Autopsy—medical information based upon an invasive examination of a body
<b>ME</b>	Medical examiner's record—where the information reported on the patient is based on a non-invasive examination of the body
<b>AR</b>	Admission record/summary—any medical information on this record should be considered as post-ER since it summarizes the patient's admission; these records are common in short hospitalizations and usually only contain: admission DX(s), final DX(s), and a listing of surgical treatments; ICD-9-CM codes are frequently available.
<b>FS</b>	Admission/discharge face sheet—face sheets are essentially the same as admission record/summaries and contain the same types of information as discussed above
<b>DS</b>	Discharge summary—shorten history of a patient's hospitalization highlighting the patient's major injuries; this record is often written from the perspective of its author which in many cases is a consultant
<b>OS</b>	Operative record—summary of a performed surgical operation often providing detailed information about a specific trauma; patients who survive the surgery are normally admitted; thus, this record is normally considered post-ER; however, if this record results from an outpatient surgery, then treat it as emergency-room related
<b>FX</b>	Radiographic records—taken after the patient has been admitted, or while in surgery or intensive care
<b>PN</b>	Patient progress notes—supplemental record containing additional nurses notes taken after the patient's admission
<b>HP</b>	History and physical exam—medical history and the results of the physical exam obtained by the emergency room physician assigned to the patient upon arrival at the emergency room
<b>CN</b>	Consultation record—consultations are in essence additional history and physical exams performed by doctors whose expertise was requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission
<b>ER</b>	Emergency room report—where the author of this information is undefined
<b>EN</b>	Emergency room nurse—"nurse/complaint of" section on the emergency room report
<b>ED</b>	Emergency room doctor—"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., doctor portion of emergency room report)
<b>NN</b>	Nurse notes—supplemental record containing additional notes taken by the emergency room nurse(s)
<b>EX</b>	Radiographic records—taken during the patients stay in the emergency room
<b>CV</b>	Coroner's verdict—statement of cause of death for legal specific regarding injuries; care must be exercised to ascertain the credentials of the verdict's author.
<b>CR</b>	Coroner's report—medical information based upon a noninvasive examination performed by a person who is not a doctor but who has the title of a coroner
<b>ET</b>	Emergency medical technician—report by a person who qualifies as an emergency medical services technician (EMS or EMT)
<b>O</b>	Other source—medical information based on an other source (e.g., newspaper, DVM—Doctor of Veterinary Medicine)

**Appendix P:**

**NASS CDS OCCUPANT ASSESSMENT FORM:**

**VEHICLE #2 RIGHT REAR PASSENGER**



# OCCUPANT ASSESSMENT FORM

1. Primary Sampling Unit Number	<u>10</u>
2. Case Number - Stratum	<u>9505</u>
3. Vehicle Number	<u>02</u>
4. Occupant Number	<u>07</u>

## OCCUPANT'S CHARACTERISTICS

5. Occupant's Age	<u>13</u>
Code actual age at time of accident.	
(00) Less than one year old (specify by month):	
(97) 97 years and older	
(99) Unknown	
6. Occupant's Sex	<u>1</u>
(1) Male	
(2) Female-not reported pregnant	
(3) Female-pregnant-1st trimester(1st-3rd month)	
(4) Female-pregnant-2nd trimester(4th-6th month)	
(5) Female-pregnant-3rd trimester(7th-9th month)	
(6) Female-pregnant-term unknown	
(9) Unknown	
7. Occupant's Height	<u>173</u>
Code actual height to the nearest centimeter.	
(999) Unknown	
<u>68</u> inches X 2.54 = <u>172.72</u> centimeters	
8. Occupant's Weight	<u>054</u>
Code actual weight to the nearest kilogram.	
(999)Unknown	
<u>120</u> pounds X .4536 = <u>54</u> kilograms	
9. Occupant's Role	<u>2</u>
(1) Driver	
(2) Passenger	
(9) Unknown	

## OCCUPANT'S SEATING

10. Occupant's Seat Position	<u>23</u>
<i>Front Seat</i>	
(11) Left side	
(12) Middle	
(13) Right side	
(14) Other (specify):	
(15) On or in the lap of another occupant	
<i>Second Seat</i>	
(21) Left side	
(22) Middle	
(23) Right side	
(24) Other (specify):	
(25) On or in the lap of another occupant	
<i>Third Seat</i>	
(31) Left side	
(32) Middle	
(33) Right side	
(34) Other (specify):	
(35) On or in the lap of another occupant	
<i>Fourth Seat</i>	
(41) Left side	
(42) Middle	
(43) Right side	
(44) Other (specify):	
(45) On or in the lap of another occupant	
(97) In or on unenclosed area	
(98) Other seat (specify):	
(99) Unknown	
11. Occupant's Posture	<u>9</u>
(0) Normal posture	
<i>Abnormal posture</i>	
(1) Kneeling or standing on seat	
(2) Lying on or across seat	
(3) Kneeling, standing or sitting in front of seat	
(4) Sitting sideways or turned to talk with another occupant or to look out a rear window	
(5) Sitting on a console	
(6) Lying back in a reclined seat position	
(7) Bracing with feet or hands on a surface in front of seat	
(8) Other abnormal posture (specify):	
(9) Unknown	

## EJECTION/ENTRAPMENT

12. Ejection 0

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

13. Ejection Area 0

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)  
(specify): \_\_\_\_\_
- (9) Unknown

14. Ejection Medium 0

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): \_\_\_\_\_
- (5) Integral structure
- (8) Other medium (specify): \_\_\_\_\_
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) 0

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment 0

- (0) Not entrapped/exit not inhibited
- (1) Entrapped/pinned - mechanically restrained
- (2) Could not exit vehicle due to jammed doors, fire, etc.  
(specify): \_\_\_\_\_
- (9) Unknown

17. Occupant Mobility 4

- (0) Occupant fatal before removed from vehicle
- (1) Removed from vehicle while unconscious or disoriented
- (2) Removed from vehicle due to injuries
- (3) Exited vehicle with some assistance
- (4) Exited vehicle under own power
- (5) Occupant fully ejected
- (9) Unknown

## BELT SYSTEM FUNCTION

18. Manual (Active) Belt System Availability 4

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

*Integral Belt Partially Destroyed*

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)
- (8) Other belt (specify): \_\_\_\_\_

(9) Unknown

19. Manual (Active) Belt System Use 04

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify): \_\_\_\_\_

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used—type unknown
- (08) Other belt used (specify): \_\_\_\_\_

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat—type unknown
- (18) Other belt used with child safety seat (specify): \_\_\_\_\_
- (99) Unknown if belt used

20. Proper Use of Manual (Active) Belts 1

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

*Belt Used Improperly*

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): \_\_\_\_\_

(8) Other improper use of manual belt system (specify): \_\_\_\_\_

(9) Unknown

21. Manual (Active) Belt Failure Modes During Accident 9

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): \_\_\_\_\_

(6) Broken retractor

(7) Combination of above (specify): \_\_\_\_\_

(8) Other manual belt failure (specify): \_\_\_\_\_

(9) Unknown

22. Shoulder Belt Upper Anchorage Adjustment 9

- (0) No shoulder belt
- (1) No upper anchorage adjustment for shoulder belt

*Adjustable Shoulder Belt Upper Anchorage*

- (2) In full up position
- (3) In mid position
- (4) In full down position
- (5) Position unknown
- (9) Unknown if position has adjustable upper anchorage adjustment

23. Automatic (Passive) Belt System Availability/Function 0

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

*Non-functional*

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

24. Automatic (Passive) Belt System Use 0

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): \_\_\_\_\_
- (3) Automatic belt use unknown
- (9) Unknown

25. Automatic (Passive) Belt System Type 0

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

26. Proper Use of Automatic (Passive) Belt System 0

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

*Automatic Belt Used Improperly*

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): \_\_\_\_\_

(8) Other improper use of automatic belt system (specify): \_\_\_\_\_

(9) Unknown

27. Automatic (Passive) Belt Failure Modes During Accident 0

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): \_\_\_\_\_

(6) Broken retractor

(7) Combination of above (specify): \_\_\_\_\_

(8) Other automatic belt failure (specify): \_\_\_\_\_

(9) Unknown

POLICE REPORTED RESTRAINT USE	AIR BAG SYSTEM FUNCTION
<p>28. Police Reported Belt Use <u>5</u></p> <p>(0) None used            (1) Police did not indicate belt use            (2) Shoulder belt            (3) Lap belt            (4) Lap and shoulder belt            (5) Belt used, type not specified            (6) Child safety seat            (7) Automatic belt            (8) Other type belt, (specify):            (9) Police indicated "unknown"</p> <p>29. Police Reported Air Bag Availability/Function <u>0</u></p> <p>(0) No air bag available            (1) Police did not indicate air bag availability/function            (2) Deployed            (3) Not deployed            (4) Unknown if deployed            (9) Police indicated "unknown"</p>	<p>30. Frontal Air Bag System Availability/Function (This Occupant Position) <u>0</u></p> <p>(0) Not equipped/not available            (1) Air bag</p> <p><i>Non-functional</i>            (2) Air bag disconnected (specify):            (3) Air bag not reinstalled            (9) Unknown</p> <p>31. Frontal Air Bag System Deployment (This Occupant Position) <u>0</u></p> <p>(0) Not equipped/not available            (1) Deployed during accident (as a result of impact)            (2) Deployed inadvertently just prior to accident            (3) Deployed, details unknown            (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)            (5) Unknown if deployed            (7) Nondeployed            (9) Unknown</p>
<p>Check the Primary Source Used In Determining Belt Use.</p> <p>[ ] Not equipped/not available/destroyed or rendered inoperative            [ ] Vehicle inspection            [ ] Official injury data  <input checked="" type="checkbox"/> Driver/occupant interview            [ ] Other (specify):            [ ] Unknown if belt used</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) <u>0</u></p> <p>(0) Not equipped/not available            (1) Air bag</p> <p><i>Non-functional</i>            (2) Air bag disconnected (specify):            (3) Air bag not reinstalled            (9) Unknown  <i>Specify type of "other" air bag present:</i>            _____</p> <p>33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) <u>0</u></p> <p>(0) Not equipped with an "other" air bag            (1) Deployed during accident (as a result of impact)            (2) Deployed inadvertently just prior to accident            (3) Deployed, details unknown            (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)            (5) Unknown if deployed            (7) Nondeployed            (9) Unknown</p> <p>34. Are There Indications of Air Bag System Failure? (This Occupant Position) <u>0</u></p> <p>(0) Not equipped/not available            (1) No            (2) Yes (specify):            (9) Unknown</p>



## FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION

35. Had Vehicle Been in Previous Accident(s)? 0

- (0) Not equipped/not available  
(1) No previous accidents

Yes

- (2) Previous accident(s) without deployment(s)  
(3) One previous accident with deployment  
(4) More than one previous accident with at least one deployment  
(8) Previous accidents, unknown deployment status  
(9) Unknown

36. Type of Air Bag 0

- (0) Not equipped/not available  
(1) Original manufacturer installed system  
(2) Retrofitted air bag  
(3) Replacement air bag  
(8) Unknown type of air bag  
(9) Unknown

37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? 0

- (0) Not equipped/not available  
(1) No prior maintenance  
(2) Yes, prior maintenance (specify): \_\_\_\_\_  
(9) Unknown

38. Air Bag Deployment Accident Event Sequence Number 00

- (00) Not equipped/not available  
\_\_\_\_\_ Code the accident event sequence number that initiated the air bag deployment  
(96) Deployed, unknown event  
(97) Not deployed  
(98) Unknown if deployed  
(99) Unknown

39. CDC For Air Bag Deployment Impact 0

- (0) Not equipped/not available  
(1) Highest delta V  
(2) Second highest delta V  
(3) Other non-coded delta V (specify): \_\_\_\_\_  
(6) Deployed, unknown event  
(7) Not deployed  
(8) Unknown if deployed  
(9) Unknown

40. Longitudinal Component of Delta V For Air Bag Deployment Impact + 000

(\_000) Not equipped/not available

Code the value of the delta V for the impact that initiated the air bag deployment

(\_996) Deployment, unknown longitudinal Delta V

(\_997) Not deployed

(\_998) Unknown if deployed

(\_999) Unknown

41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? 0

- (0) Not equipped/not available  
(1) No  
(2) Yes  
(3) Deployed, unknown if flap(s) opened at designated tear points  
(7) Not deployed  
(8) Unknown if deployed  
(9) Unknown

42. Were Air Bag Module Cover Flap(s) Damaged? 0

- (0) Not equipped/not available  
(1) No  
(2) Yes (specify): \_\_\_\_\_  
(3) Deployed, unknown if air bag module cover flap(s) damaged  
(7) Not deployed  
(8) Unknown if deployed  
(9) Unknown

43. Was There Damage To The Air Bag? 00

- (00) Not equipped/not available  
(01) Not damaged

Yes - Air Bag Damage

- (02) Ruptured  
(03) Cut  
(04) Torn  
(05) Holed  
(06) Burned  
(07) Abraded  
(88) Other damage (specify): \_\_\_\_\_

(95) Damaged, details unknown

(96) Deployed, unknown if damaged

(97) Not deployed

(98) Unknown if deployed

(99) Unknown

FIRST SEAT FRONTAL AIR BAG SYSTEM  
EVALUATION *continued*

## HEAD RESTRAINT AND SEAT EVALUATION

44. Source of Air Bag Damage 00

- (00) Not equipped/not available  
 (01) Not damaged  
 (02) Object worn by occupant, (specify):

(03) Object carried by occupant, (specify):

(04) Adaptive/assistive controls, (specify):

- (05) Fire in vehicle  
 (06) Thermal burns  
 (07) Rescue or emergency efforts  
 (88) Other damage source (specify):

- (95) Damaged, unknown source  
 (96) Deployed, unknown if damaged  
 (97) Not deployed  
 (98) Unknown if deployed  
 (99) Unknown

45. Was The Air Bag Tethered? 0

- (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify number of tether straps):

- (3) Deployed, unknown if tethered  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

46. Did The Air Bag Have Vent Ports? 0

- (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify number of vent ports):

- (3) Deployed, unknown if vent ports present  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

47. Was the Air Bag in this Occupant's Position Contacted by Another Occupant? 0

- (0) Not equipped/not available  
 (1) No  
 (2) Yes (specify):

- (3) Deployed, unknown if other occupant contact to air bag  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

48. Was This Occupant Wearing Eye-wear? 0

- (0) Not equipped/not available  
 (1) No  
 (2) Eyeglasses/sunglasses  
 (3) Contact lenses  
 (4) Deployed, unknown if eyewear worn  
 (7) Not deployed  
 (8) Unknown if deployed  
 (9) Unknown

49. Head Restraint Type/Damage by Occupant at This Occupant Position 9

- (0) No head restraints  
 (1) Integral—no damage  
 (2) Integral—damaged during accident  
 (3) Adjustable—no damage  
 (4) Adjustable—damaged during accident  
 (5) Add-on—no damage  
 (6) Add-on—damaged during accident  
 (8) Other (specify):  
 (9) Unknown

50. Seat Type (this Occupant Position) 99

- (00) Occupant not seated or no seat  
 (01) Bucket  
 (02) Bucket with folding back  
 (03) Bench  
 (04) Bench with separate back cushions  
 (05) Bench with folding back(s)  
 (06) Split bench with separate back cushions  
 (07) Split bench with folding back(s)  
 (08) Pedestal (i.e., column supported)  
 (09) Box mounted seat (i.e., van type)  
 (10) Other seat type (specify):

(99) Unknown

51. Seat Orientation (this Occupant Position) 9

- (0) Occupant not seated or no seat  
 (1) Forward facing seat  
 (2) Rear facing seat  
 (3) Side facing seat (inward)  
 (4) Side facing seat (outward)  
 (8) Other (specify):

(9) Unknown

52. Seat Track Adjusted Position Prior To Impact 1

- (0) Occupant not seated or no seat  
 (1) Non-adjustable seat track

*Adjustable Seat Track*

- (2) Seat at forward most track position  
 (3) Seat between forward most and middle track positions  
 (4) Seat at middle track position  
 (5) Seat between middle and rear most track positions  
 (6) Seat at rear most track position  
 (9) Unknown

HEAD RESTRAINT AND SEAT EVALUATION *continued*53. Seat Back Incline Prior and Post Impact 01

- (00) Occupant not seated or no seat  
 (01) Not adjustable

*Upright prior to impact*

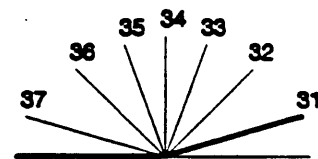
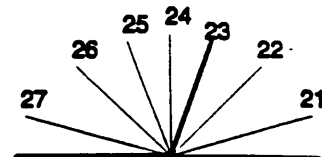
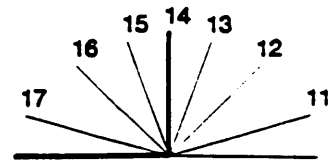
- (11) Moved to completely rearward position  
 (12) Moved to rearward midrange position  
 (13) Moved to slightly rearward position  
 (14) Retained pre-impact position  
 (15) Moved to slightly forward position  
 (16) Moved to forward midrange position  
 (17) Moved to completely forward position

*Slightly reclined prior to impact*

- (21) Moved to completely rearward position  
 (22) Moved to rearward midrange position  
 (23) Retained pre-impact position  
 (24) Moved to upright position  
 (25) Moved to slightly forward position  
 (26) Moved to forward midrange position  
 (27) Moved to completely forward position

*Completely reclined prior to impact*

- (31) Retained pre-impact position  
 (32) Moved to rearward midrange position  
 (33) Moved to slightly rearward position  
 (34) Moved to upright position  
 (35) Moved to slightly forward position  
 (36) Moved to forward midrange position  
 (37) Moved to completely forward position  
 (99) Unknown

54. Seat Performance (this Occupant Position) 9

- (0) Occupant not seated or no seat  
 (1) No seat performance failure(s)  
 (2) Seat adjusters failed  
 (3) Seat back folding locks or "seat back" failed (specify): \_\_\_\_\_  
 (4) Seat track/anchors failed  
 (5) Deformed by impact of occupant  
 (6) Deformed by passenger compartment intrusion, (specify): \_\_\_\_\_  
 (7) Combination of above (specify): \_\_\_\_\_  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

## CHILD SAFETY SEAT

55. Child Safety Seat Make/Model 0 0 0

(000) No child safety seat

Applicable codes are found in your NASS CDS  
Data Collection, Coding and Editing

(950) Built-in child safety seat

(997) Other make/model (specify):  
\_\_\_\_\_

(998) Unknown make/model

(999) Unknown if child safety seat used

56. Type of Child Safety Seat 0

(0) No child safety seat

(1) Infant seat

(2) Toddler seat

(3) Convertible seat

(4) Booster seat - with shield

(5) Booster seat - without shield

(7) Other type child safety seat (specify):  
\_\_\_\_\_

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

57. Child Safety Seat Orientation 0 0

(00) No child safety seat

*Designed for Rear Facing for This Age/Weight*

(01) Rear facing

(02) Forward facing

(08) Other orientation (specify):  
\_\_\_\_\_

(09) Unknown orientation

*Designed For Forward Facing for This Age/Weight*

(11) Rear facing

(12) Forward facing

(18) Other orientation (specify):  
\_\_\_\_\_

(19) Unknown orientation

*Unknown Design or Orientation For This  
Age/Weight, or Unknown Age/Weight*

(21) Rear facing

(22) Forward facing

(28) Other orientation (specify):  
\_\_\_\_\_

(29) Unknown orientation

(99) Unknown if child safety seat used

58. Child Safety Seat Harness Usage 0 059. Child Safety Seat Shield Usage 0 060. Child Safety Seat Tether Usage 0 0Note: Options below applicable to  
Variables OA58-OA60.

(00) No child safety seat

*Not Designed With Harness/Shield/Tether*(01) After market harness/shield/tether  
added, not used

(02) After market harness/shield/tether used

(03) Child safety seat used, but no after market  
harness/shield/tether added(09) Unknown if harness/shield/tether  
added or used*Designed With Harness/Shield/Tether*

(11) Harness/shield/tether not used

(12) Harness/shield/tether used

(19) Unknown if harness/shield/tether used

*Unknown If Designed With Harness/Shield/Tether*

(21) Harness/shield/tether not used

(22) Harness/shield/tether used

(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

**INJURY CONSEQUENCES****61. Injury Severity (Police Rating)** 0

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

**62. Treatment - Mortality** 6

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):  
\_\_\_\_\_

*Nonfatal*

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (7) Treatment - other (specify):  
\_\_\_\_\_
- (8) Transported to a medical facility-unknown if treated
- (9) Unknown

**63. Type Of Medical Facility (for Initial Treatment)** 5

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):  
\_\_\_\_\_
- (9) Unknown

**64. Hospital Stay** 00

- (00) Not Hospitalized
- \_\_\_\_\_ Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

**65. Working Days Lost** 97

- \_\_\_\_\_ Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

**STOP WORK HERE****VARIABLES 66-74****TO BE CODED BY THE ZONE CENTER**

**TO BE CODED BY THE ZONE CENTER****INJURY CONSEQUENCES****TRAUMA DATA****66. Time to Death**00

Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)

- (00) Not fatal  
(96) Fatal - ruled disease  
(99) Unknown

**67. 1st Medically Reported Cause of Death**00**68. 2nd Medically Reported Cause of Death**00**69. 3rd Medically Reported Cause of Death**00

Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death

- (00) Not fatal or no additional causes  
(96) Mode of death given but specific injuries are not linked to cause of death. (specify):

(97) Other result (includes fatal ruled disease) (specify):

(99) Unknown

**70. Number of Recorded Injuries for This Occupant**01

Code the actual number of injuries recorded for this occupant.

- (00) No recorded injuries  
(97) Injured, details unknown  
(99) Unknown if injured

**71. Glasgow Coma Scale (GCS) Score (at Medical Facility)**02

- (00) Not injured  
(01) Injured - not treated at medical facility  
(02) No GCS Score at medical facility  
(03-15) Code the actual value of the initial GCS Score recorded at medical facility.  
(97) Injured, details unknown  
(99) Unknown if injured

**72. Was the Occupant Given Blood?**1

- (1) No - blood not given  
(2) Yes - blood given  
(specify units):  
(9) Unknown if blood given

**73. Arterial Blood Gases (ABG) - HCO<sub>3</sub>**01

- (00) Not injured  
(01) Injured, ABGs not measured or reported  
(02-50) Code the actual value of the HCO<sub>3</sub>  
(96) ABGs reported, HCO<sub>3</sub> unknown  
(97) Injured, details unknown  
(99) Unknown if injured

**BELT USE DETERMINATION****74. Primary Source of Belt Use Determination**3

- (0) Not equipped/not available/destroyed or rendered inoperative  
(1) Vehicle inspection  
(2) Official injury data  
(3) Driver/occupant interview  
(8) Other (specify):  
(9) Unknown if belt used

**Appendix Q:**

**NASS CDS OCCUPANT INJURY FORM:**

**VEHICLE #2 RIGHT REAR PASSENGER**



U.S. Department of Transportation  
National Highway Traffic Safety  
Administration

## OCCUPANT INJURY FORM

Form Approved  
O.M.B. No. 2127-0021  
NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

10

3. Vehicle Number

02

2. Case Number - Stratum

9505

4. Occupant Number

04

### INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

Source of Injury Data	Body Region	A.I.S. - 90				Injury Source	Injury Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number		
		Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity						
Cervical Strain 1st	5. <u>7</u>	6. <u>6</u>	7. <u>4</u>	8. <u>02</u>	9. <u>78</u>	10. <u>1</u>	11. <u>6</u>	12. <u>603</u>	13. <u>2</u>	14. <u>3</u>	15. <u>00</u>
2nd	16. <u>  </u>	17. <u>  </u>	18. <u>  </u>	19. <u>  </u>	20. <u>  </u>	21. <u>  </u>	22. <u>  </u>	23. <u>  </u>	24. <u>  </u>	25. <u>  </u>	26. <u>  </u>
3rd	27. <u>  </u>	28. <u>  </u>	29. <u>  </u>	30. <u>  </u>	31. <u>  </u>	32. <u>  </u>	33. <u>  </u>	34. <u>  </u>	35. <u>  </u>	36. <u>  </u>	37. <u>  </u>
4th	38. <u>  </u>	39. <u>  </u>	40. <u>  </u>	41. <u>  </u>	42. <u>  </u>	43. <u>  </u>	44. <u>  </u>	45. <u>  </u>	46. <u>  </u>	47. <u>  </u>	48. <u>  </u>
5th	49. <u>  </u>	50. <u>  </u>	51. <u>  </u>	52. <u>  </u>	53. <u>  </u>	54. <u>  </u>	55. <u>  </u>	56. <u>  </u>	57. <u>  </u>	58. <u>  </u>	59. <u>  </u>
6th	60. <u>  </u>	61. <u>  </u>	62. <u>  </u>	63. <u>  </u>	64. <u>  </u>	65. <u>  </u>	66. <u>  </u>	67. <u>  </u>	68. <u>  </u>	69. <u>  </u>	70. <u>  </u>
7th	71. <u>  </u>	72. <u>  </u>	73. <u>  </u>	74. <u>  </u>	75. <u>  </u>	76. <u>  </u>	77. <u>  </u>	78. <u>  </u>	79. <u>  </u>	80. <u>  </u>	81. <u>  </u>
8th	82. <u>  </u>	83. <u>  </u>	84. <u>  </u>	85. <u>  </u>	86. <u>  </u>	87. <u>  </u>	88. <u>  </u>	89. <u>  </u>	90. <u>  </u>	91. <u>  </u>	92. <u>  </u>
9th	93. <u>  </u>	94. <u>  </u>	95. <u>  </u>	96. <u>  </u>	97. <u>  </u>	98. <u>  </u>	99. <u>  </u>	100. <u>  </u>	101. <u>  </u>	102. <u>  </u>	103. <u>  </u>
10th	104. <u>  </u>	105. <u>  </u>	106. <u>  </u>	107. <u>  </u>	108. <u>  </u>	109. <u>  </u>	110. <u>  </u>	111. <u>  </u>	112. <u>  </u>	113. <u>  </u>	114. <u>  </u>



# OCCUPANT INJURY DATA

Source of Injury Data	A.I.S. - 90						Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect				
11th	—	—	—	—	—	—	—	—	—	—
12th	—	—	—	—	—	—	—	—	—	—
13th	—	—	—	—	—	—	—	—	—	—
14th	—	—	—	—	—	—	—	—	—	—
15th	—	—	—	—	—	—	—	—	—	—
16th	—	—	—	—	—	—	—	—	—	—
17th	—	—	—	—	—	—	—	—	—	—
18th	—	—	—	—	—	—	—	—	—	—
19th	—	—	—	—	—	—	—	—	—	—
20th	—	—	—	—	—	—	—	—	—	—
21st	—	—	—	—	—	—	—	—	—	—
22nd	—	—	—	—	—	—	—	—	—	—
23rd	—	—	—	—	—	—	—	—	—	—
24th	—	—	—	—	—	—	—	—	—	—
25th	—	—	—	—	—	—	—	—	—	—

132-Q

**OCCUPANT INJURY CLASSIFICATION**

Body Region	Specific Anatomic Structure	Level of Injury	Aspect
(1) Head		Specific injuries are assigned consecutive two-digit numbers beginning with 02.	(1) Right
(2) Face			(2) Left
(3) Neck			(3) Bilateral
(4) Thorax			(4) Central
(5) Abdomen		To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.	(5) Anterior
(6) Spine			(6) Posterior
(7) Upper Extremity			(7) Superior
(8) Lower Extremity			(8) Inferior
(9) Unspecified			(9) Unknown
			(0) Whole region
	The exceptions to this rule apply to:		
<b>Type of Anatomic Structure</b>	<b>Whole Area</b>		
(1) Whole Area	(02) Skin - Abrasion		
(2) Vessels	(04) Skin - Contusion		
(3) Nerves	(06) Skin - Laceration		
(4) Organs (includes Muscles/ligaments)	(08) Skin - Avulsion		
(5) Skeletal (includes joints)	(10) Amputation		
(6) Head - LOC	(20) Burn		
(9) Skin	(30) Crush		
	(40) Degloving		
	(50) Injury - NFS		
	(90) Trauma, other than mechanical		
	<b>Head - LOC</b>		
	(02) Length of LOC		
	(04) Level		
	(06) of		
	(08) Consciousness		
	(10) Concussion		
	<b>Spine</b>		
	(02) Cervical		
	(04) Thoracic		
	(06) Lumbar		

**Abbreviated Injury Scale**

- |                               |
|-------------------------------|
| (1) Minor Injury              |
| (2) Moderate Injury           |
| (3) Serious Injury            |
| (4) Severe Injury             |
| (5) Critical Injury           |
| (6) Maximum (untreatable)     |
| (7) Injured, unknown severity |

**SOURCE OF INJURY DATA****INJURY SOURCE****DIRECT/INDIRECT INJURY****CONFIDENCE LEVEL****OFFICIAL RECORDS**

- (1) Autopsy records with or without hospital/medical records
- (2) Hospital/medical records other than emergency room (e.g., discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

**UNOFFICIAL RECORDS**

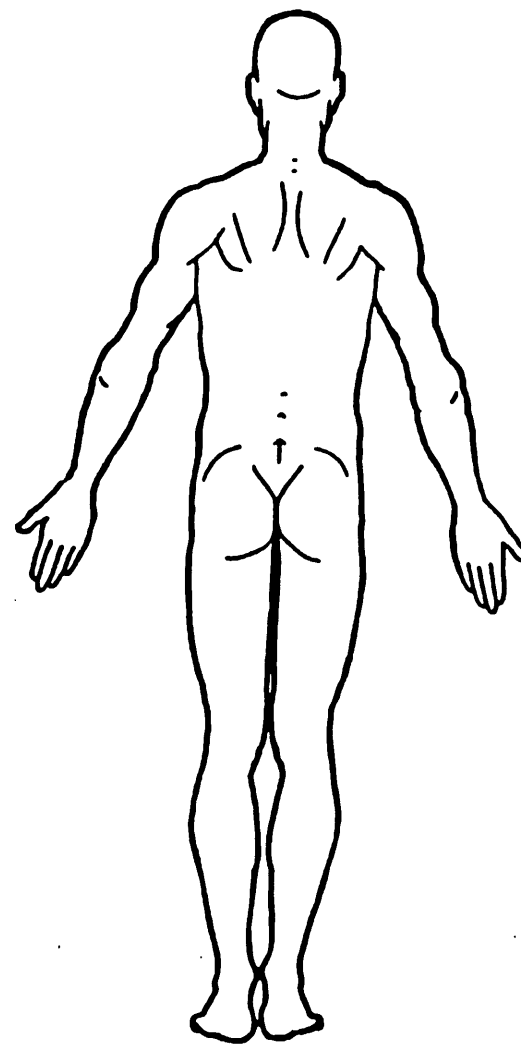
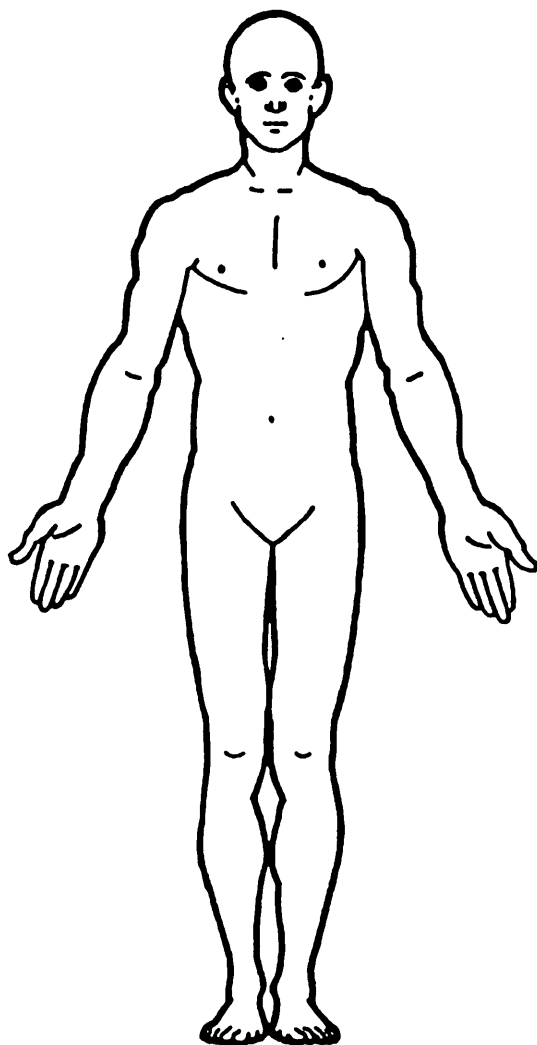
- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify): \_\_\_\_\_
- (9) Police

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

## OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



133-a

## INJURY SOURCES

### FRONT

- (001) Windshield
- (002) Mirror
- (003) Sunvisor
- (004) Steering wheel rim
- (005) Steering wheel hub/spoke
- (006) Steering wheel (combination of codes 004 and 005)
- (007) Steering column, transmission selector lever, other attachment
- (008) Cellular telephone or CB radio
- (009) Add on equipment (e.g., tape deck, air conditioner)
- (010) Left instrument panel and below
- (011) Center instrument panel and below
- (012) Right instrument panel and below
- (013) Glove compartment door
- (014) Knee bolster
- (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (017) Windshield reinforced by exterior object (specify):

(019) Other front object (specify):

### LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests
- (052) Left side hardware or armrest
- (053) Left A (A1/A2)-pillar
- (054) Left B-pillar
- (055) Other left pillar (specify):
- (056) Left side window glass
- (057) Left side window frame
- (058) Left side window sill
- (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (060) Other left side object (specify):

### RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests

- (102) Right side hardware or armrest
- (103) Right A (A1/A2)-pillar
- (104) Right B-pillar
- (105) Other right pillar (specify):
- (106) Right side window glass
- (107) Right side window frame
- (108) Right side window sill
- (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (110) Other right side object (specify):

### INTERIOR

- (151) Seat, back support
- (152) Belt restraint webbing/buckle
- (153) Belt restraint B-pillar or door frame attachment point
- (154) Other restraint system component (specify):
- (155) Head restraint system
- (160) Other occupants (specify):
- (161) Interior loose objects
- (162) Child safety seat (specify):
- (163) Other interior object (specify):

### AIR BAG

- (170) Air bag-driver side
- (171) Air bag-driver side and eyewear
- (172) Air bag-driver side and jewelry
- (173) Air bag-driver side and object held
- (174) Air bag-driver side and object in mouth
- (175) Air bag compartment cover-driver side
- (176) Air bag compartment cover-driver side and eyewear
- (177) Air bag compartment cover-driver side and jewelry
- (178) Air bag compartment cover-driver side and object held
- (179) Air bag compartment cover-driver side and object in mouth
- (180) Air bag-passenger side
- (181) Air bag-passenger side and eyewear
- (182) Air bag-passenger side and jewelry

- (183) Air bag-passenger side and object held
- (184) Air bag-passenger side and object in mouth
- (185) Air bag compartment cover-passenger side
- (186) Air bag compartment cover-passenger side and eyewear
- (187) Air bag compartment cover-passenger side and jewelry
- (188) Air bag compartment cover-passenger side and object held
- (189) Air bag compartment cover-passenger side and object in mouth
- (190) Other air bag (specify):
- (195) Other air bag compartment cover (specify):

### ROOF

- (201) Front header
- (202) Rear header
- (203) Roof left side rail
- (204) Roof right side rail
- (205) Roof or convertible top

### FLOOR

- (251) Floor (including toe pan)
- (252) Floor or console mounted transmission lever, including console
- (253) Parking brake handle
- (254) Foot controls including parking brake

### REAR

- (301) Backlight (rear window)
- (302) Backlight storage rack, door, etc.
- (303) Other rear object (specify):

### ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration
- (402) Steering control devices (attached to OEM steering wheel)
- (403) Steering knob attached to steering wheel
- (405) Replacement steering wheel (i.e., reduced diameter)
- (406) Joy stick steering controls
- (407) Wheelchair tie-downs
- (408) Modification to seat belts, (specify):
- (409) Additional or relocated switches, (specify):
- (410) Raised roof

- (411) Wall mounted head rest (used behind wheel chair)
- (412) Other adaptive device (specify):

### EXTERIOR OF OCCUPANT'S VEHICLE

- (451) Hood
- (452) Outside hardware (e.g., outside mirror, antenna)
- (453) Other exterior surface or tires (specify):
- (454) Unknown exterior objects

### EXTERIOR OF OTHER MOTOR VEHICLE

- (501) Front bumper
- (502) Hood edge
- (503) Other front of vehicle (specify):
- (504) Hood
- (505) Hood ornament
- (506) Windshield, roof rail, A-pillar
- (507) Side surface
- (508) Side mirrors
- (509) Other side protrusions (specify):
- (510) Rear surface
- (511) Undercarriage
- (512) Tires and wheels
- (513) Other exterior of other motor vehicle (specify):
- (514) Unknown exterior of other motor vehicle

### OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

- (551) Ground
- (598) Other vehicle or object (specify):
- (599) Unknown vehicle or object

### NONCONTACT INJURY

- (601) Fire in vehicle
- (602) Flying glass
- (603) Other noncontact injury source (specify):
- (604) Air bag exhaust gases
- (697) Injured, unknown source

# OFFICIAL INJURY DATA — SKELETAL INJURIES

Restrained?

☐ No

☐ Yes

Blood Alcohol  
Level (mg/dl)

BAL = \_\_\_\_

Glasgow Coma  
Scale Score

GCSS = \_\_\_\_

Units of Blood  
Given

Units = \_\_\_\_

Arterial Blood  
Gases

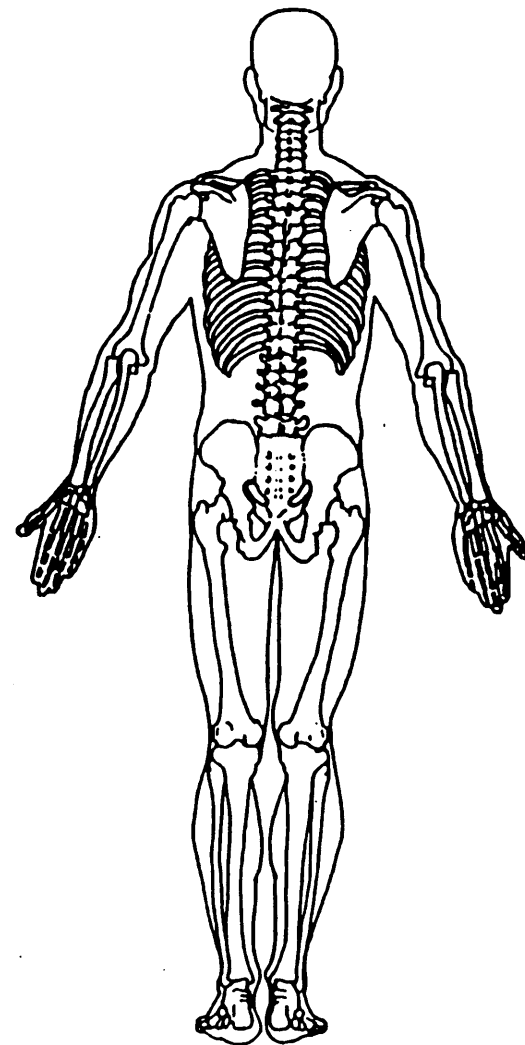
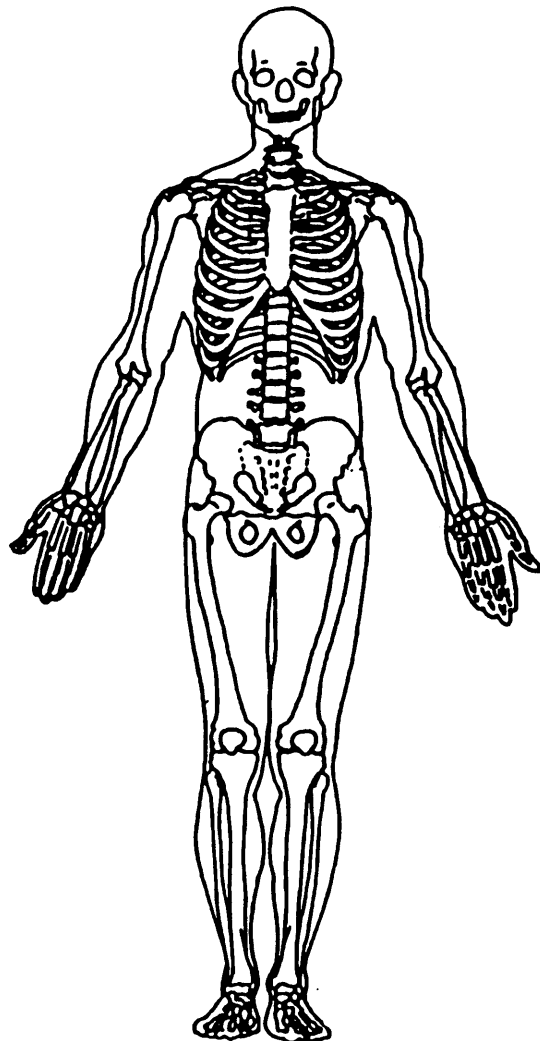
pH = \_\_\_\_

PO<sub>2</sub> = \_\_\_\_

PCO<sub>2</sub> = \_\_\_\_

HCO<sub>3</sub> = \_\_\_\_

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



134-a

## CAUSE OF DEATH

## ICD-9-CM

### OTHER DRUGS (GV16)

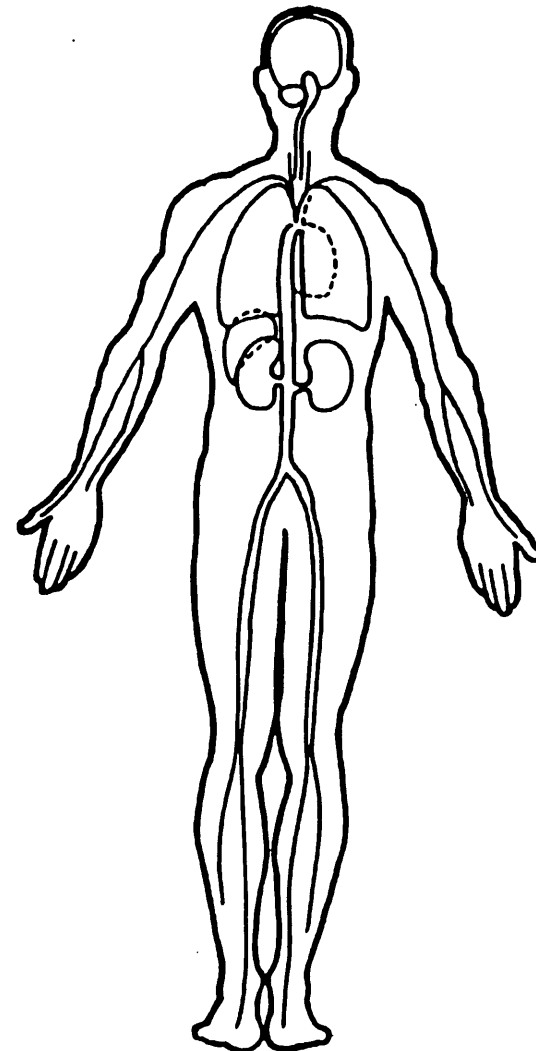
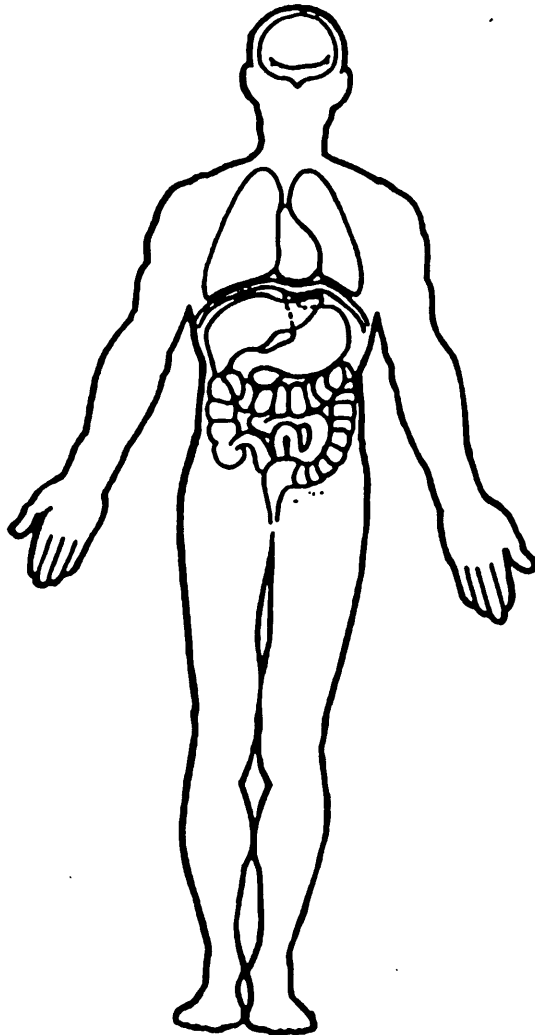
Specimen Test Type	Drug(s)	Drug Type
<input type="checkbox"/> Blood and urine tests <input type="checkbox"/> Blood test only <input type="checkbox"/> Urine test only <input type="checkbox"/> Other test <input type="checkbox"/> Unspecified		

### MEDICAL RECORD ABBREVIATIONS

Symbol	Record Type Description
<b>A</b>	Autopsy—medical information based upon an invasive examination of a body
<b>ME</b>	Medical examiner's record—where the information reported on the patient is based on a non-invasive examination of the body
<b>AR</b>	Admission record/summary—any medical information on this record should be considered as post-ER since it summarizes the patient's admission; these records are common in short hospitalizations and usually only contain: admission DX(s), final DX(s), and a listing of surgical treatments; ICD-9-CM codes are frequently available.
<b>FS</b>	Admission/discharge face sheet—face sheets are essentially the same as admission record/summaries and contain the same types of information as discussed above
<b>DS</b>	Discharge summary—shorten history of a patient's hospitalization highlighting the patient's major injuries; this record is often written from the perspective of its author which in many cases is a consultant
<b>OS</b>	Operative record—summary of a performed surgical operation often providing detailed information about a specific trauma; patients who survive the surgery are normally admitted; thus, this record is normally considered post-ER; however, if this record results from an outpatient surgery, then treat it as emergency-room related
<b>PX</b>	Radiographic records—taken after the patient has been admitted, or while in surgery or intensive care
<b>PN</b>	Patient progress notes—supplemental record containing additional nurses notes taken after the patient's admission
<b>HP</b>	History and physical exam—medical history and the results of the physical exam obtained by the emergency room physician assigned to the patient upon arrival at the emergency room
<b>CN</b>	Consultation record—consultations are in essence additional history and physical exams performed by doctors whose expertise was requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission
<b>ER</b>	Emergency room report—where the author of this information is undefined
<b>EN</b>	Emergency room nurse—"nurse/complaint of" section on the emergency room report
<b>ED</b>	Emergency room doctor—"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., doctor portion of emergency room report)
<b>NN</b>	Nurse notes—supplemental record containing additional notes taken by the emergency room nurse(s)
<b>EX</b>	Radiographic records—taken during the patients stay in the emergency room
<b>CV</b>	Coroner's verdict—statement of cause of death for legal specific regarding injuries; care must be exercised to ascertain the credentials of the verdict's author.
<b>CR</b>	Coroner's report—medical information based upon a noninvasive examination performed by a person who is not a doctor but who has the title of a coroner
<b>ET</b>	Emergency medical technician—report by a person who qualifies as an emergency medical services technician (EMS or EMT)
<b>O</b>	Other source—medical information based on an other source (e.g., newspaper, DVM—Doctor of Veterinary Medicine)

## OFFICIAL INJURY DATA — INTERNAL INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



Appendix R:

FATAL TRAFFIC CRASH REPORT:

BY THE

 POLICE DEPARTMENT



City of [REDACTED]

# FATAL TRAFFIC CRASH

Police Department

## MULTIPLE MOTOR VEHICLE COLLISION

U.S. Route # [REDACTED] Street) At [REDACTED]

[REDACTED] Illinois

[REDACTED] 1994 at 4:01 PM

Field Report # [REDACTED]

RECEIVED  
[REDACTED] - 94

Submitted By:

Officer [REDACTED]

[REDACTED] Police Department

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### EXHIBIT SECTION

After-Crash Situation Sketch

Vehicle Damage Sketches

Toxicology Report (Copy) *with NASS CI Form*

Autopsy Report (Copy) *with NASS CI Form*

Traffic Crash Report [REDACTED] (Copy)

## SYNOPSIS

DATE AND TIME: [REDACTED], [REDACTED] 1994, at or about 1601 Hours (4:01 PM).

LOCATION: This incident occurred on U.S. Route [REDACTED] Street) at the intersection of [REDACTED] Avenue, within the corporate limits of the City of [REDACTED] County, Illinois.

FIELD REPORT: [REDACTED] Police Department # [REDACTED]

ACCIDENT CLASSIFICATION: Multiple Motor Vehicles--Same and Opposite Direction Collisions.

SEVERITY: At the time of this report, this event has resulted in one fatal injury, two minor injuries and approximately \$18,000.00 in property destruction.

DRIVERS:

[REDACTED] Illinois [REDACTED]  
White/Female--51 Years of Age  
DOB: [REDACTED]  
Fatal Injuries

[REDACTED] Oklahoma [REDACTED]  
White/Female--45 Years of Age  
DOB: [REDACTED]  
Minor Injuries

[REDACTED] Illinois [REDACTED]  
White/Male--37 Years of Age  
DOB: [REDACTED]  
Uninjured

**OCCURRENCE  
WITNESSES:**

[REDACTED]  
[REDACTED] Illinois [REDACTED]  
White/Male--30 Years of Age  
DOB: [REDACTED]

[REDACTED]  
[REDACTED] Illinois [REDACTED]  
White/Female--34 Years of Age  
DOB: [REDACTED]

**VEHICLES:**

Unit #1 is described a maroon 1990 Cadillac Eldorado passenger car, Illinois Registration Plate [REDACTED] VIN: 1G6EL1335LU [REDACTED]

Unit #2 is described as a white 1994 Oldsmobile Cutlass passenger car, Illinois Registration Plate [REDACTED] VIN: 1G3AG55M2R6 [REDACTED]

Unit #3 is described as a 1993 Chevrolet Astro Van, Illinois Registration Plate [REDACTED]. VIN: 1GCDM19Z1PB [REDACTED]

**SUMMARY:**

Unit #1 was traveling westbound in the left turn lane of Route [REDACTED] at [REDACTED] Avenue and collided with the rear of Unit #2, which was stopped, awaiting to make a left turn. Unit #2 then traveled westbound across the intersection and came to rest in the westbound center traffic lane of Route [REDACTED]. After the initial collision, Unit #1 continued into the intersection and collided with the front-end of Unit #3, which was traveling eastbound in the center traffic lane of Route [REDACTED].

**CONTRIBUTING  
FACTORS:**

Examination of the available statements and physical evidence suggests the potential of one or more of the following factors:

- Deficient driver strategy.
- Driver fatigue or drowsiness.
- Medical distress or incapacitation.

**CRIMINAL  
CHARGES:**

At the time of this report, no traffic citations or criminal complaints have been issued.

## NARRATIVE

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On [REDACTED], 1994, at or about 1601 Hours (4:01 PM), officers from the [REDACTED] Police Department ([REDACTED].P.D.) and [REDACTED] Fire and Rescue ([REDACTED].F.&R.) responded to the intersection of U.S. Route [REDACTED] ([REDACTED] Street) and [REDACTED] Avenue, regards a dispatch of a head-on traffic crash.

[REDACTED] Police Officer [REDACTED] was the first officer to arrive and found the victim, [REDACTED] (Driver #1) lying supine on the roadway, with resuscitative efforts being applied by several citizens. [REDACTED] reported the assessment of the victim as having no pulse. At such time, I responded to the crash scene from the [REDACTED] Building, where I was involved in an arrest situation.

Upon arrival, I observed that the victim, [REDACTED] had been removed to an ambulance from [REDACTED] and resuscitative efforts were being administered. The subject displayed no pulse or respiration and sustained potentially fatal injuries, as evaluated by EMS personnel. Medical assistance and aid was provided to the other involved parties of this event. The area was likewise canvassed for potential occurrence witnesses. The crash site was secured and traffic was temporarily re-directed by responding patrol and community service officers. The on-scene patrol supervisor, Officer [REDACTED], assigned me to assist with this investigation.

Upon assessing the crash site, I observed a maroon Cadillac (Unit #1), with obvious front-end damage, facing

westbound, in the intersection, approximately six inches in front of the left front corner of a white Chevrolet Astro Van (Unit #3), which was facing eastbound. West of the intersection, Unit #2, a white Oldsmobile Cutlass, was at rest, facing westbound, in essentially the center traffic lane of Route [REDACTED]. The vehicle displayed extensive rear-end damage.

Police Detective [REDACTED] was summoned to the scene and assisted by photographing the crash site and the involved motor vehicles. With the assistance of Officer [REDACTED], I made basic measurements of the crash scene and relevant roadway data for later construction of an after-crash situation sketch.

Units #1 and #2 were subsequently removed by/to [REDACTED] and placed into secure storage at the facility. Unit #3 sustained minor damage and was released to the driver at the scene.

The following are the specific observations and details relating to this event:

## DRIVERS

---

Driver #1 was identified as [REDACTED], a white female, 51 years of age, DOB: [REDACTED] [REDACTED] Illinois TX: [REDACTED]. [REDACTED] is further described as being 5'03" tall, weighing approximately 145 pounds, having gray/black hair and gray eyes. At the time of this event, [REDACTED] possessed a valid Class "B" Illinois Commercial Vehicle Drivers License (DLN: [REDACTED]). [REDACTED] indicate that her license has an endorsement for passenger vehicles, has no restrictions and no reported convictions for traffic offenses, during the past twelve months.

At the scene of this event, [REDACTED] was found unconscious, by assisting concerned citizens, in the front driver seat area of Unit #1. [REDACTED] displayed no detectable pulse or respiration. She was removed from the car shortly after the collision and resuscitative efforts were administered. The victim was turned over to officers from [REDACTED] F.&R. and resuscitative efforts were continued. [REDACTED] was subsequently transported to [REDACTED] Hospital, in [REDACTED] Illinois, by [REDACTED] F.&R. She was pronounced dead, shortly after her arrival at the facility.

The [REDACTED] County Coroner's Office was notified by the hospital staff. [REDACTED]'s body was subsequently transported to the [REDACTED] County Morgue for a scheduled post-mortem examination.

This event occurred on U.S. Route [REDACTED] Street) at the intersection of [REDACTED] Avenue, within the corporate limits of the City of [REDACTED] County, Illinois.

In this area, Route [REDACTED] runs nominally East and West and consists of four through traffic lanes, two eastbound, two westbound, and dedicated left turn lanes for access to both legs of [REDACTED] Avenue. [REDACTED] Avenue runs nominally North and South, consists of two through traffic lanes and dedicated left turn lanes, for access to U.S. Route [REDACTED]

Traffic controls at the intersection consist of vehicle and pedestrian actuated traffic signals with a left turn phase on all legs, painted dashed white lane separation lines, white left turn lane separation lines, double-yellow lane separation lines, lane usage markings, and moderately worn painted crosswalks and stop bars. The speed limit for the area is posted at 30 Miles Per Hour for Route [REDACTED] West of the intersection and 35 Miles Per Hour, East of the intersection. The roadway is essentially straight, level and constructed of traveled bituminous asphalt. No roadway defects or abnormalities were observed.

At the time of this event, the skies were cloudy and the air temperature was approximately 60 Degrees. Precipitation was not observed and was not a factor in this event. The area surrounding the crash site consists of various types of commercial and service operations. Traffic volume was observed to be heavy and the afternoon rush hour period was beginning.



The body was stripped and the following injury was noted: Minor bruising to the nose, obvious abrasion to the neck, minor abrasion to the jaw area, minor bruising to the chest area, bruising and abrasion to the upper abdomen area, bruising to the inner right arm, multiple lacerations to the inside of the mouth and patterned minor abrasions to the chin. Typical patterned bruising from shoulder and lap restraint belts were not observed.

Dr. [REDACTED]' internal examination revealed that the victim sustained numerous fractured ribs, a fractured sternum, a severely torn aorta, liver laceration and a severely fractured neck, in the C-1 to C-2 region. Dr. [REDACTED] related that the major injury observed was consistent with injuries sustained in and automobile collision. From her preliminary findings, the major injury was effectively unsurvivable and was essentially the cause of death. I queried the doctor regards the potential of medical distress or incapacitation of the victim, prior to the traffic crash. From her preliminary examination, such a conclusion is indeterminate. A formal report of her findings will be forwarded when completed.

On [REDACTED] 94, I received a copy of the toxicology examination results from the submitted blood and vitreous fluid samples recovered from the victim. With the exception of caffeine, no evidence of alcohol or other drugs were reported. A copy of the results are included in the Exhibit Section.

Driver #2 was identified as [REDACTED] a white female, 45 years of age, DOB: [REDACTED], [REDACTED], [REDACTED].

At the crash scene, the victim's handbag and contents were recovered from the vehicle interior and secured.

On [REDACTED] 94, I receipted and returned the items identified as Item #1-CM (\$ [REDACTED] USC) and Item #2-CM (Handbag and assorted contents) to the subject's surviving spouse. On [REDACTED] 94, I had the occasion to examine the involved vehicle (Unit #1) and recovered a pair of eyeglasses and a fractured dental plate from the right front floorboard area. In a post-event conversation with [REDACTED], he reported that the aforementioned dental plate was removed from the victim and placed in the vehicle by an unidentified [REDACTED] F.&R. responder. The articles were retained as Items #3-CM and per the survivor's request, made available for recovery.

On [REDACTED] 94 at 1000 Hours (10:00 AM) [REDACTED] [REDACTED] and I were present at the [REDACTED] [REDACTED] for the post-mortem examination of the victim, [REDACTED]. The procedure was performed by [REDACTED] Dr. [REDACTED] MD. Also present were [REDACTED] and [REDACTED] assistants. Dr. [REDACTED] was provided the available case information and this investigator's specific concerns.

[REDACTED] was observed clad in a blue/white zippered windbreaker, green/pink/white shirt, white bra, green pants, white panties, white canvass shoes and a white Velcro back support brace. She also had an intubation (ventilation) tube applied and cardiac monitor leads attached to her chest.

██████████. She is further described as being 5'03" tall, weighing 107 pounds and having hazel eyes.

At the time of this event, ██████ possessed a valid ██████ Class "D" Operators License (DLN: ██████). Records of the ██████ indicate she has no license restrictions and has no reported convictions for traffic offenses.

██████ was found ambulatory at the scene of this event by responding personnel. She complained of neck pain and was transported, by ██████ F.&R., to the ██████ ██████ in ██████ Illinois, for treatment.

At or about 1800 Hours (6:00 PM), ██████ ██████ and I proceeded to the facility. Upon arrival, we interviewed other family members, but were not able to speak specifically with ██████ due to her need for medical treatment. ██████ was treated and released from the facility later in the evening.

Driver #3 was identified as ██████, a white male, 37 years of age, DOB: ██████ ██████ ██████, Illinois, ██████ ██████

██████ is further described as being 6'01" tall, weighing 175 pounds and having blond hair and blue eyes. At the time of this event, ██████ possessed a valid Class "DM" ██████ Drivers License (DLN: ██████). ██████ indicate ██████ is restricted to the use of corrective lenses and has no convictions for traffic offenses during the past twelve months.

At the scene of this event, I found [REDACTED] ambulatory and wearing eyeglasses. He related he was uninjured, was wearing a seatbelt and declined any medical assistance.

I personally debriefed [REDACTED] at the scene. In summary, he is employed by [REDACTED], as a repair technician, and was en-route to a service call. He was traveling in his van (Unit #3), eastbound on Route [REDACTED] and was stopped in the center traffic lane, awaiting the signal light to change to green. He relates he was the third vehicle back (West) of the intersection and he observed numerous vehicles make left turns onto southbound [REDACTED] Avenue from westbound Route [REDACTED] under the "green arrow." The signal light changed to solid green and he observed the white Oldsmobile (Unit #2) stop as required in the westbound turn lane, to await approaching traffic to clear. At such time, he began to pull forward, to enter the intersection behind other uninvolved vehicles, under a solid green light. He then observed a red Cadillac (Unit #1) traveling westbound in the left turn lane, at a speed he estimates to be approximately 25-30 Miles Per Hour. The vehicle displayed no evidence of slowing and struck the white Oldsmobile (Unit #2) in the rear-end. Unit #2 was projected westbound into the intersection. After the initial crash, the Cadillac (Unit #1) veered to the left (South) into his path of travel. The event was immediate and he could not avoid a collision. Unit #1 struck his van in the front-end and both units came to a stop in the intersection. He could not specifically estimate his speed, but related he was not traveling very fast because he began to move forward, just West

of the intersection. After the collision, he exited his van and began to assist gathering citizens who were aiding Driver #1.

██████ related that during the collision between the Cadillac (Unit #1) and the Oldsmobile (Unit #2) he did not specifically see a driver or occupant(s) inside of Unit #1. He related that he saw the air bag, but did not perceive anyone behind the steering wheel. He concluded that the driver may have been slumped over prior to the collision. ██████ could provide no further information and was released at the scene.

## PASSENGERS

The following subjects were identified as being passengers in Unit #2 (Oldsmobile) and were found ambulatory at the scene of this event:

                    , a white female, 20 years of age, DOB:                       
                    ,                     ,                     ,                       
                    .                      was a reported belted front seat passenger (Position #3) and had no complaint of injury. She was released at the scene.

                    , a white female, 18 years of age, DOB:                       
                    ,                     ,                     ,                       
                    .                      was a rear seat passenger (Position #4) of Unit #2. She complained of neck pain and pain in her left knee. She was transported to the                                          , in                      Illinois, by                      F.&R.                      was treated and released.

                    , a white male, 13 years of age, DOB:                       
                    ,                     ,                     ,                       
                    .                      was a rear seat passenger of Unit #2 (Position #6).                      had no complaint of injury and was released to a parent at the scene.

At the crash scene, the subjects related that while stopped at the intersection, attempting to turn left and proceed southbound on                      Avenue, their vehicle was struck in the rear-end, without any warning. In researching their trip plan, the subjects related that they had come to Illinois

to attend the funeral of a family member. At the time of the crash, they were en-route to [REDACTED], in [REDACTED] [REDACTED] after having lunch at a local restaurant. The subjects could provide no further information and were released.

## VEHICLES

---

Unit #1 is described as a maroon 1990 Cadillac Eldorado two-door passenger car, bearing current Illinois Registration Plate [REDACTED] (VIN:1G6EL1335LU[REDACTED]). The vehicle is owned by and registered to Driver #1, [REDACTED] and her husband, [REDACTED]. [REDACTED] indicate that the vehicle was purchased as "New" on [REDACTED]/89.

At the scene of this event, Unit #1 was found at rest in the intersection of [REDACTED] Avenue and Route [REDACTED], facing in a westerly heading. Initial assessment of the vehicle revealed moderate front-end damage and obvious interior contact damage by the occupant/driver. I had the occasion to briefly examine the interior at the scene and noted the ignition key present, in an "Off" position, the gear shift selector in "Park" and light switches in an "Off" position. The control positioning was obviously altered by responding "Good Samaritans" and/or fire department personnel. Whether the engine remained running and was subsequently turned off at the scene or stalled prior to or as a result of the collision is indeterminate.

Due to the nature of the crash, I examined the vehicle's brake pedal and found same high and firm. The vehicle's accelerator pedal was in a retracted position and operated without binding. No objects were found in the driver floor area to support pedal fouling. An underhood examination showed the throttle plate lever closed and the throttle stop solenoid in an off and retracted position. No binding or sticking was observed during repeated manual and pedal actuated operations.



After locating the position of the vehicle by measurement, it was towed by/to [REDACTED] [REDACTED], [REDACTED], Illinois) and placed into secured storage.

On [REDACTED] 94, at or about 1400 Hours (2:00 PM), I had the occasion to examine the vehicle at the storage garage. The vehicle displayed obvious contact damage and white paint transfer to the hood, grille, bumper and left front fender, left (driver side) of center. A small area of contact damage and white paint transfer was observed to the bumper area, right of center. Induced damage was observed throughout the remainder of the front-end. Thrust, in the major damage area, appears to have been received from between the eleven to twelve o'clock direction. Very minor interference to the front wheel rotation would be expected due to contact with damaged components. The tires were in good condition, remained inflated and appeared undamaged. The front wheels were observed in a straight ahead attitude. A basic sketch of the vehicle damage is include in the Exhibit Section.

I next examined the interior and observed that the driver side air bag had been deployed. The steering column was collapsed inboard and displaced upwards. The top of the steering wheel was in contact with the top of the dashboard. No obvious deformation was observed to the wheel. The windshield displayed contact damage to the upper left (driver) side, to the left and above the steering wheel area, and was potentially induced by driver contact. The vehicle is equipped with bucket seats, separated by a center console. The driver

seat back was found at an approximate 45 degree angle rearward. If caused by the effects of the collision, driver adjustment or subsequent rescue efforts is undetermined. The seat back controls functioned properly and no evidence of stripping of the latch teeth was detected. The driver side lap/shoulder combination belt was found retracted against the left side "B" pillar. The receiving receptacle was partially concealed between the driver's seat and center console. No abrasions or evidence of loading were found on the belt to support usage. The windshield was clear of obstructions. The vehicle's electrical system was disrupted when officers from [REDACTED] F.&R. cut the battery cables, as a matter of fire prevention protocol. Further examination of engine performance and positioning of the electronic ventilation system controls could not be performed. Light and speed control switches were observed in an off position. The door glass was opened about one quarter of the way on both front doors. Eyeglasses and a fractured dental plate, from the victim, were recovered from the right front floorboard area. A small pool of blood was observed on the console, in the area of the gear shift selector lever. The interior was observed lightly loaded with personal items. A bag type cellular telephone, was observed plugged into the cigar lighter and found lying on the right front floorboard.

The interior contact damage and victim injury pattern suggests that the victim driver was most likely unrestrained and subsequently struck the steering wheel and windshield during the initial collision. The patterned lacerations on her

chin may be explained by contact with the leather stitched steering wheel or contact with the plastic zipper on her nylon jacket. Both items displayed a similar pattern.

The vehicle (Unit #1) was to have recently received repair for a performance complaint. Service staff at [REDACTED] [REDACTED], Illinois [REDACTED] indicated that repairs were performed on or about [REDACTED]/94 and at that time, the vehicle displayed 61,514 Miles on the odometer. [REDACTED], the shop owner, related that the vehicle sustained a reported malfunction, in that the vehicle stalled down the street from the owner's home and the engine would not accelerate above an idle. The vehicle co-owner, [REDACTED], contacted the shop and requested that the fuel filter be replaced, relating that he could not find the correct one at available auto parts outlets. The vehicle was towed into the shop and the fuel filter was replaced without improvement. Further diagnosis revealed that the vehicle had sustained an engine management system "Electronic Control Module" failure. The component was replaced with positive improvement. No further performance complaint or comment was received from the customer.

I queried the staff regards an alleged "unintended acceleration" condition. In summary, they have not received any complaints from other vehicle owners regards such a condition and were not aware of any manufacturer recall campaigns assigned to address same.

On [REDACTED]/94, at or about 1400 Hours (2:00 PM), I had the described vehicle towed to the City of [REDACTED] Maintenance Garage ([REDACTED] [REDACTED], Illinois) for the purpose of a detailed examination. The specific issue to be resolved was a brake system failure, as alleged by the surviving spouse.

[REDACTED] and his staff, were requested to disassemble the vehicle as needed to perform a reasonable examination. Also present at the facility during the examination were [REDACTED] of [REDACTED] who towed the vehicle to the garage, and myself. The consistent opinions developed by the staff, after the examination, was that there was not a hydraulic brake system failure.

As previously noted, the vehicle displayed a high and firm brake pedal. The dual hydraulic system fluid reservoir was observed to be full and no evidence of leakage was detected from the reservoir or master cylinder. The disc brake pad wear was within normal limits. No evidence of recent component replacement or service was noted. The brake rotors displayed normal corrosion and scoring. The rear brake rotors still had the factory installed retainers intact. The brake caliper piston seals and hydraulic fluid lines were dry and intact. No tool marks were observed on the caliper mounting pins, related hardware or other system components. The fixed and flexible hydraulic lines were all dry and unremarkable.

How an engine stalling condition could specifically effect the vacuum assist system is indeterminate. Typically, one or more assisted applications are available upon loss of engine power. Braking ability is retained, but additional brake pedal effort is required.

Unit #2 is described as a white 1994 Oldsmobile Cutlass Ciera four-door passenger car, bearing current Illinois Registration Plate [REDACTED] (VIN: 1G3AG55M2R6[REDACTED]). The vehicle is registered to and owned by [REDACTED] Rent-A-Car, [REDACTED] Illinois.

The vehicle was found at rest, in the westbound traffic lane of Route [REDACTED] west of the intersection of [REDACTED] Avenue. Initial assessment of the damage was to the right rear and extensive in nature. The vehicle was secured, at the scene, by the driver and the keys were later retrieved from same, for towing/removal purposes.

The vehicle position was located by measurement and it was subsequently removed by/to [REDACTED] and placed into secure storage at the facility.

On [REDACTED] 94, at or about 1400 Hours (2:00 PM) I had the occasion to examine same at the garage. The vehicle displayed contact damage to the right rear, right of center. Induced damage was substantial and consumed the rear of the vehicle, roof, left and right rear door area and right front door. The rear window tempered glass was broken out. The right rear tire was locked by damage and displaced forward. All the tires remained inflated. Grounding of the muffler was noted. Thrust

appears to have been sustained from a six o'clock direction. A basic sketch of the vehicle damage is included in the Exhibit Section.

From the contact damage area, I examined the two right rear tail lamp bulbs. The lower bulb sustained direct contact damage which destroyed the glass envelope and filaments. The upper bulb, an index base, dual contact, dual filament signal bulb remained intact. The two filaments sustained deformation (elongation) consistent with the dynamics of the collision.

I examined the vehicle interior and noted 15,308 miles displayed on the odometer. The ventilation controls were set on heater, medium temperature and low fan speed. With the exception of the two front seat backs tilted rearward, approximately 45 degrees, the interior was unremarkable. Due to the collision dynamics, seat belt usage is undetermined. The belts and appropriate receptacles were all accessible. The lighting control switches were found in an "Off" position. No further examination was performed due to a disrupted electrical system, by [REDACTED] F.&R. personnel. Overall, no defects or abnormalities were detected.

Unit #3 is described as a white 1993 Chevrolet Astro Van, bearing current Illinois Truck Registration Plate [REDACTED] (VIN: 1GCDM19Z1PB[REDACTED]). The vehicle is registered to and owned by [REDACTED], Illinois. The vehicle is leased to [REDACTED], [REDACTED], Illinois, [REDACTED].

The vehicle was found at rest in the intersection of Route [REDACTED] at [REDACTED] Avenue, facing in an easterly heading, in front of (West) the front-end of Unit #1, approximately six inches.

Damage was assessed as minor and consisted of a rearward displaced bumper edge, slightly depressed left front fender and a fractured grille. Contact damage was left (driver side) of center.

The vehicle was found functional and was released to the driver [REDACTED] at the scene, after its position was located by basic measurements.

## WITNESS STATEMENTS

At the scene of this event, officers located [REDACTED]

[REDACTED] a white male, DOB: [REDACTED]

[REDACTED] Illinois [REDACTED]

At the time of this event, [REDACTED] was stopped in the southbound traffic lane of [REDACTED] Avenue, awaiting the signal light to change to green. [REDACTED] relates that he observed the red car (Unit #1) strike the white car (Unit #2), which was stopped on [REDACTED] awaiting to make a left turn onto southbound [REDACTED] Avenue, sending it across the intersection. He observed the white van (Unit #3) traveling eastbound. Unit #3 did not hit the white car (Unit #2) but was struck by the front of the Cadillac (Unit #1) due to Unit #1's momentum.

At or about 1900 Hours (7:00 PM) I spoke to [REDACTED] personally. He related a similar account of the event adding that he was the second car back (North) of the intersection. He estimated the speed of the Cadillac (Unit #1) at 30 to 35 Miles Per Hour. I asked if he specifically saw the driver or occupants of the Cadillac. He replied "No", that he only saw the air bag and did not see a driver. [REDACTED] was unable to provide any further information.

Responding officers located [REDACTED] a female white, DOB: [REDACTED] Illinois [REDACTED] at the scene. Initially she provided officers with an account of the event that was not readily possible. Upon re-interview, she stated that she is uncertain as to the actual events of the crash.



## SUPPLEMENTAL STATEMENTS

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On [REDACTED] 94, at or about 2000 Hours (8:00 PM), I spoke with [REDACTED] a white female, 26 years of age, DOB: [REDACTED] [REDACTED] Illinois [REDACTED] [REDACTED]

In summary, [REDACTED] related that she was traveling westbound on [REDACTED] and came upon the results of this event. She is a nurse by profession and stopped to see if she could render any assistance. She approached the red Cadillac (Unit #1) and observed an unidentified male subject checking the female occupant. The male related to her that the female occupant was not breathing. [REDACTED] observed the female slumped forward and to the right. She related that the victim was essentially in the driver seat with her left shoulder against the steering wheel and her head down on the center console. She observed slight bleeding from her mouth. [REDACTED] recalls that she did not have to unbuckle a seatbelt from the victim and suspects she was not wearing one. With assistance supplied by an unidentified military officer, the victim was removed from the vehicle and placed on the ground. She assessed the injuries and began to administer C.P.R. [REDACTED] was later assisted by another nurse and arriving emergency personnel. [REDACTED] observed that the victim was in full arrest, displayed fixed, dilated pupils and may have sustained a severe cervical injury. No evidence of ETOH (Ethanol) was reported. [REDACTED] could provide no further information.

On [REDACTED] 94, at or about 19:30 Hours (7:30 PM) I spoke to

a white female, 40 years of age, DOB:

Illinois'

In summary, [REDACTED] was traveling eastbound on [REDACTED] shortly after this event. She did not see the crash but observed an unidentified nurse attempting to administer C.P.R. to a woman on the ground. [REDACTED], who is also a registered nurse, stopped and assisted as needed. [REDACTED] could only describe the victim's condition as serious. She could provide no further information.

On [REDACTED] 1994, at or about 1500 Hours (3:00 PM), I located [REDACTED] and spoke to [REDACTED] of the [REDACTED]

Illinois

In summary, [REDACTED] related that he did not see the actual collision, but observed numerous people surrounding one of the involved vehicles (Unit #1), from his adjacent office. He proceeded to the area to see if he could assist. When he arrived, he observed an unidentified nurse attempting to remove a female subject from a red Cadillac (Unit #1). He aided in her removal and stood-by as the initial nurse and a second arriving nurse began resuscitation efforts. [REDACTED] could provide no information as to the attitude of the female driver within the car or restraint usage, relating that the unidentified nurse already had the driver upright in the driver's seat. He assisted by lifting/removing the victim's

head and torso while the nurse lifted/removed her legs. [REDACTED] could provide no further information.

On [REDACTED]/94, at or about 0930 Hours (9:30 AM), I spoke to [REDACTED] a white male, 56 years of age, DOB: [REDACTED] Illinois, [REDACTED] Mr. [REDACTED] is the surviving spouse of the victim driver (Driver #1).

In summary, [REDACTED] related that his wife reportedly left work early at [REDACTED] in [REDACTED] Illinois, where she has been working in the office, because she did not feel well. He related that about a month or so ago, [REDACTED] (Driver #1) injured her lower back as the result of a fall. He describes that during the recovery period, she reportedly suffered high blood pressure, the result of the intense pain. [REDACTED] has since been cleared by her physician to return to work and has done so. Recently, she developed pneumonia, was under a doctor's care and has been using an antibiotic for treatment. [REDACTED] reports that she was at the end of her prescription and has previously complained that they make her sick. He reports that she left work early yesterday because she related feeling weak and tired. [REDACTED] reportedly takes no other medication and has had no other complaints.

[REDACTED] was deeply concerned regards developing information that his wife sustained fainting or "black-out" episodes. He explained that a week or so ago, [REDACTED] recovered their car from [REDACTED] in [REDACTED] after

a repair. She apparently had a conversation with the shop owner, [REDACTED] regards health issues. [REDACTED] believes the information was misinterpreted and he emphatically denied that his wife has ever experienced these types of symptoms or conditions.

In a conversation later in the day with Mr. [REDACTED] and other unidentified survivors, all insistently denied that [REDACTED] has had any observed periods of light-headedness or fainting. When the subjects were queried about the victim's regular usage of a seatbelt, the resultant responses were varied.

Mr. [REDACTED] likewise had a concern regards the motor vehicle (Unit #1) and alleged that an "unintentional acceleration" problem, was the cause of the harmful event. He went on to explain that, as previously mentioned, the car was in the shop about a week ago. The specific symptoms cited by Mr. [REDACTED] were limited to a stalling when accelerating condition. The vehicle's fuel filter and an ignition system component were reportedly replaced to resolve the problem.

The survivors could only comment that [REDACTED] was a professional bus driver and usually very careful. Her being at the intersection, where this event occurred, is consistent with her usual trip plan, when returning home from work.

On [REDACTED] 1994, at or about 1400 Hours (2:00 PM), I interviewed [REDACTED] a white male, 52 years of age, DOB: [REDACTED] [REDACTED] Illinois [REDACTED]  
[REDACTED]

In summary, on or about [REDACTED]/94, he had a conversation with a customer known to him a [REDACTED] when she retrieved her Cadillac (Unit #1) from his service department. The two exchanged pleasantries and he asked how things were going. [REDACTED] went on to relate that a month or so ago, she had a fall and injured her back. She has not been feeling so well and has suffered several episodes of fainting since the back injury. I asked specifically if she made such a statement or the condition was implied? [REDACTED] stated that [REDACTED] specifically made the statement. [REDACTED] could provide no further information.

On [REDACTED] 94, I spoke to an unidentified agent of the [REDACTED] [REDACTED], [REDACTED] Illinois [REDACTED] where the victim, [REDACTED] was employed.

In summary, he related that to the best of his knowledge, [REDACTED] left work at 1530 Hours (3:30 PM), as scheduled on the day of the harmful event and he could not comment on her condition or any complaints of illness or deficiency.

On [REDACTED] 94, at or about 1130 Hours (11:30 AM), I spoke to [REDACTED] [REDACTED], via TX. Ms. [REDACTED] was [REDACTED]'s immediate supervisor, at the business, on the day of the harmful event.

In summary, she related that on the day of the harmful event, [REDACTED] was, as she described, normal. [REDACTED] went on to relate that [REDACTED] has been suffering back pain, the result of her fall type injury, a month or so ago, and recently

suffered a case of pneumonia. [REDACTED] only knew [REDACTED] to take an over the counter "Advil" like product, for relief of her persistent back pain.

[REDACTED] and [REDACTED] reportedly sat and talked, for about an hour, before [REDACTED] left, as scheduled, at or about 1530 Hours (3:30 PM) to go home. [REDACTED] has been, as she describes, "run-down" from the illness/injury but had no specific complaint of illness or deficiency on the day of the harmful event. I asked if [REDACTED] has had any observed episodes of fainting, light headedness or had made any mention or complaint of same? [REDACTED] replied "No."

[REDACTED] has been working in the office as of late and has been cleared to return to her school bus driving assignment. [REDACTED] could provide no further information.

## ROADWAY DATA

---

The following data was located by basic measurement for development of an After-Crash Situation Sketch. I employed the use of the "Coordinate System" of data measurement. The Reference Point developed was the intersection of the prolongation of the East roadway edge of [REDACTED] Avenue and the South roadway edge of U.S. Route [REDACTED] ([REDACTED] Street). The Reference Line developed was the South roadway edge of [REDACTED] ([REDACTED] Street).

### UNIT #1--Cadillac Passenger Car

Left Front Wheel	1.0' East	14.10' North
Left Rear Wheel	9.0' East	16.90' North

### UNIT #2--Oldsmobile Passenger Car

Left Front Wheel	138.5' West	34.0' North
Left Rear Wheel	129.3' West	31.0' North

### UNIT #3--Chevrolet Astro Van

Right Front Wheel	7.50' West	13.5' North
Right Rear Wheel	16.50' West	13.75' North

### Roadway Scrape

End	41.5' East	30.5' North
Start	44.0' East	30.5' North

### Friction Mark

Start	36.75' East	30.75' North
End	127.0' West	36.0' North

## CHAIN OF EVENTS

From the available information and evidence, the chain of events that can be reasonably established is that on [REDACTED] 1994, at or about 1600 Hours (4:00 PM) [REDACTED], was driving her maroon Cadillac (Unit #1), westbound on [REDACTED]. Her vehicle entered the left turn lane, which directs traffic to southbound [REDACTED] Avenue, at a speed, estimated by witnesses, of between 25 to 35 Miles Per Hour. The turn lane is 200 feet in length and is preceded by an estimated 80 foot long taper and painted traffic median. During this approximate time period, a white Oldsmobile passenger car (Unit #2) driven by [REDACTED] (Driver #2), was also in the described turn lane, attempting to turn left and had appropriately stopped after loss of the left turn traffic signal arrow. Mrs. [REDACTED] had three of her children present in the car and was en-route to an address on [REDACTED] which is approximately .4 miles South of the target intersection.

Eastbound through traffic had begun to move after receipt of a green traffic signal light. Unit #1 struck the right rear of Unit #2 with its left front. Unit #2 then proceeded across the intersection and came to rest, essentially in the westbound center traffic lane of [REDACTED] a distance of approximately 175 Feet from the area of first vehicle contact.

To what degree the post-collision maneuver of Unit #2 was controlled by the driver, influenced by the absence of braking, influenced by application of vehicle power, or induced solely by the collision forces is undetermined.



After the initial collision, Unit #1 arced slightly to the left (South) and entered the eastbound center traffic lane of Route [REDACTED]

Unit #3, driven by repair technician [REDACTED] was stopped on eastbound Route [REDACTED] in the center traffic lane, the third vehicle from the intersection. The eastbound traffic received a green traffic signal light and began to move forward. As Unit #3 began to proceed through the intersection, the right front of Unit #1 struck the left front of Unit #3, causing minor damage. Both units came to final rest in the intersection.

During the collision processes, Driver #1 [REDACTED] sustained potentially fatal injuries, consistent with a vehicle collision. Available information and evidence suggests she was unrestrained and had sustained a severe and potentially fatal impact with fixed interior vehicle components.

## CONTRIBUTING FACTORS

In this event, Driver #1 had an obligation to stop her vehicle and not collide with the lawfully stopped Unit #2. The severity of injuries received by the apparently unrestrained victim driver may have been reduced by the effective use of available passenger restraint devices.

As a matter of traffic law, as cited in the *Illinois Compiled Statutes (ILCS)*, *Illinois Vehicle Code (IVC)* Chapter 625 5/11-601(a), a driver has a duty not to collide with other vehicles lawfully upon or entering the highway. Additionally, ILCS 625 5/12-603.1 states that front seat vehicle occupants must wear a properly adjusted and fastened seatbelt.

This harmful event was influenced by a strategy failure, deficiency, or condition which resulted in the initial vehicle collision. At the time of this report, a specific single factor cannot be isolated. From the available information however, several reasonable conclusions can be developed. Theories, relating to several suspected vehicle deficiencies have likewise been examined. A specific conclusion is left to the opinion of the examiner:

DEFICIENT DRIVER PERCEPTION, DISTRACTION, OR PRE-OCCUPATION. Unit #1 was described by an involved driver and occurrence witness as to have been traveling westbound down the left turn lane of [REDACTED]. No effort to stop or avoid the resultant initial collision was detected. No roadway tire friction marks were found to suggest aggressive vehicle braking or avoidance maneuvers. No driver view obstructions were

detected. The effect of the driver being blinded by the sun was not a factor. No obvious mechanical vehicle defects were detected. No evidence to suggest a prior vehicle collision is supported. No adverse environmental conditions existed at the time of the crash. No roadway or control device abnormalities or malfunctions were detected or reported.

FATIGUE, MEDICAL DISTRESS OR INCAPACITATION. As noted previously, evidence of collision avoidance maneuvers were not detected or observed. An involved driver (Driver #3) suspected that the victim driver may have been slumped over before the initial crash, citing that he only observed the air bag and not the driver, inside Unit #1.

Inboard steering column collapse, upward steering column displacement and windshield contact damage, consistent with the direction of the initial collision forces, can only suggest that during the initial collision process, the unrestrained victim's body was basically in the driver seat area and not lying across the center console, as found post-collision.

The victim, was reported by her husband, as to have been feeling weak, tired and had left work early to go home. The victim's job supervisor related that the victim has been feeling "run-down" from a recent injury and illness. On the day of the harmful event however, the victim left work as scheduled, had no unusual complaint of illness, deficiency and no extraordinary condition was observed by, or expressed to the supervisor, by the victim driver.

A statement made by a detached individual revealed that the victim driver specifically reported having experienced episodes of fainting, since sustaining a back injury a month or so ago. The survivors have however emphatically denied that such a condition existed.

The conclusion of medical distress or incapacitation of the victim, prior to the initial collision, is indeterminate, based upon the results of a pathological examination. Toxicology examination of blood and vitreous fluid indicated no evidence of drugs or alcohol. Fatigue, sleep and drowsiness are however conditions that are typically unmeasurable and undetectable.

VEHICLE MALFUNCTION. The victim's survivor has alluded to several potential vehicle deficiencies that he believes may have contributed to the harmful event.

Initially, "unintended acceleration" was purported to have been the cause of the crash. The inference cited, by the surviving spouse, was that the vehicle accelerated unexpectedly and the driver was basically unable to control or stop the vehicle.

Examination of the vehicle's throttle control system produced no indication of failure, sticking or interference. A review of available resource publications revealed no vehicle recalls or reported defect trends relating to this type of phenomena or incident.

Brake system failure was also cited as a probable cause of this event. Professional examination of the vehicle produced no evidence of a hydraulic brake system failure or evidence of a system deficiency.

Lastly, a condition of engine stalling/hesitation, upon acceleration, was cited. The vehicle sustained an engine management system failure and subsequent break-down, approximately one week before this event. An electronic component was replaced, with positive improvement. After completion of the repair, the service facility received no further owner complaint of a vehicle performance deficiency. Had an alleged stall situation indeed occurred, typically, steering effort would be increased and power assisted braking would be reduced to one or more aided applications, before additional brake pedal effort is required. Had the driver been aware of a pre-existing vehicle deficiency, additional trip risks were assumed by continued vehicle operation.

Review of available publications and research of manufacturer recall trends, for the described Unit #1, produced the following defect recall campaigns:

#90-C-1 -- Replacement of a rear seat belt pendulum.

#90-C-3 -- Transaxle gear shift selector control cable replacement.

## CRIMINAL CHARGES

No traffic citations or criminal complaints have been issued at the time of this report.

Pending the development of further information or directive, I plan no further action.

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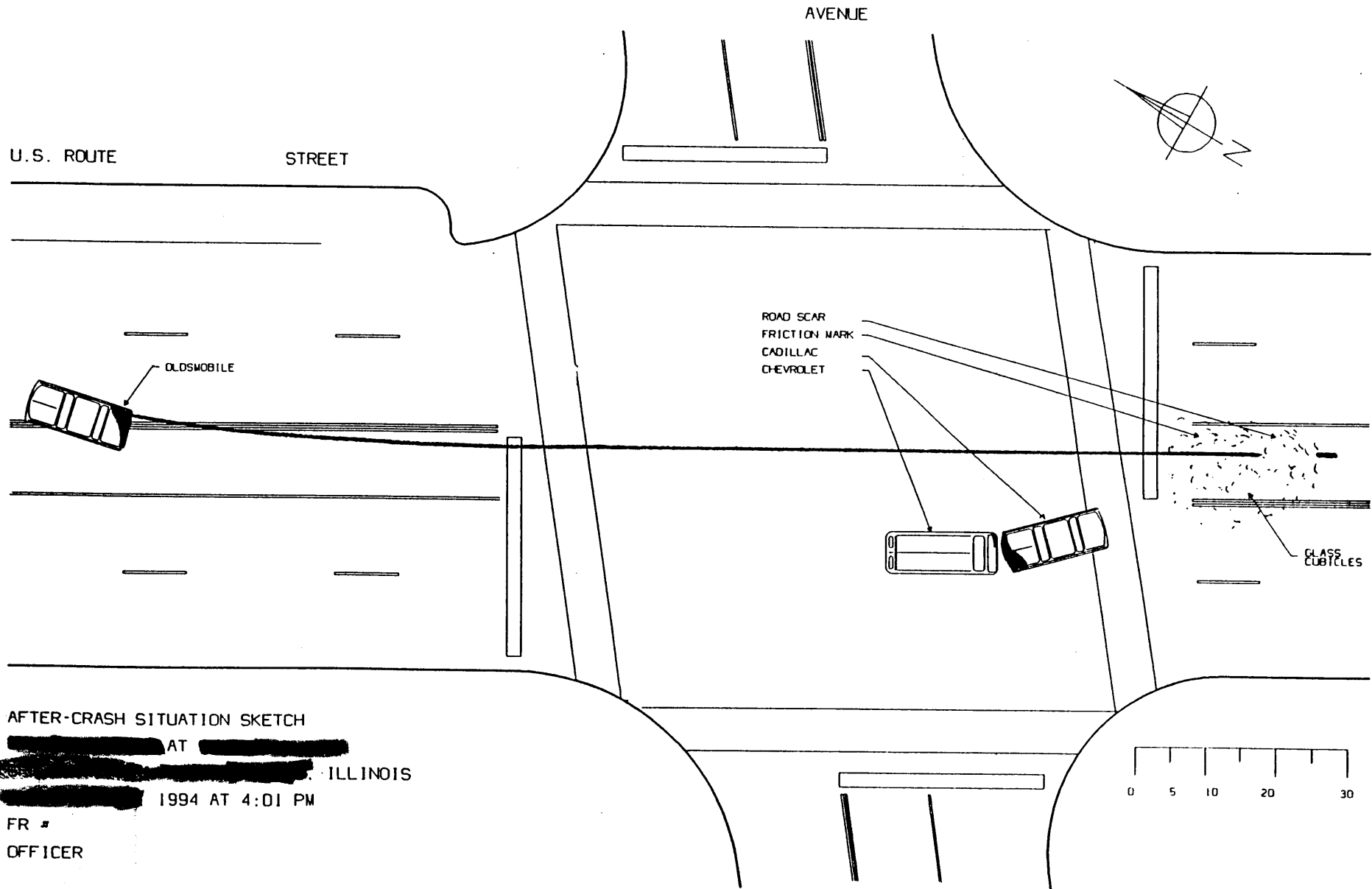
REPORTING OFFICER

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SUPERVISOR APPROVING

END OF REPORT [REDACTED]

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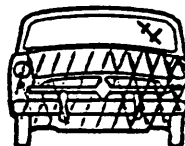
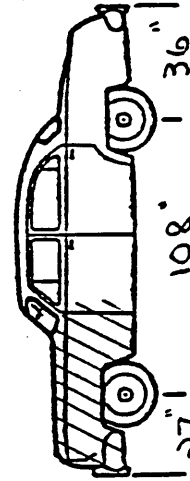
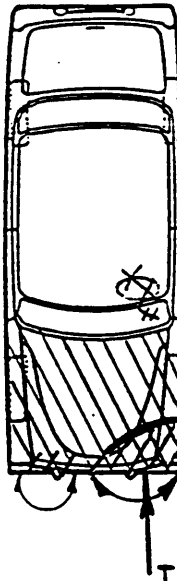
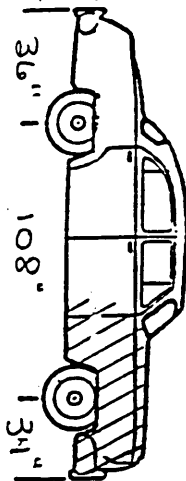
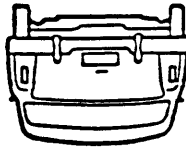
AFTER-CRASH SITUATION SKETCH

[REDACTED] AT [REDACTED]  
[REDACTED] ILLINOIS  
[REDACTED] 1994 AT 4:01 PM  
FR #  
OFFICER

VEHICLE DAMAGE  
RECORD

EXAMINED AT - Location			
[REDACTED]			
ADDRESS			
[REDACTED]			
STATE			
IL			
OR	DATE	MONTH	1994
400	[REDACTED]	[REDACTED]	
OTOS - Made by			
Scene - [REDACTED]			

ACCIDENT NUMBER	CASE FILE		
ON	Street or road		
AT	Intersection with or distance from		
IN	City	County	State
1601	[REDACTED]	[REDACTED]	IL
HOUR of accident	DATE	MONTH	1994
1601	[REDACTED]	[REDACTED]	



DAMAGE CODE SYMBOL	
✓	Extent of contact damage other than with ground.
→	Thrust direction at point of greatest penetration
)	Areas of ground contact except by tires.
NOT OBSERVED, NOT NOTED	
NOT APPLICABLE, NO SUCH	
DON'T KNOW, CAN'T TELL	
WORK OPERABLE, FUNCTIONAL	
DAMAGED BUT FUNCTIONAL	
BROKEN, NOT FUNCTIONAL	
MISSING, DETACHED, GONE	

See other side for size, body, and use codes. Make additional notes there.

ODOMETER	61,514 +
SPEEDOMETER	0
LITE SWITCH	?
BRAKES	0
STEER WHEEL	XX
WINDSHIELD	XX
HOOD	XX
ENGINE	?
BATTERY	X
STEER LINKS	0
TRUNK, DOOR	0
PLATE LIGHT	?
DRIVE SHAFT	0
REAR GLASS	0

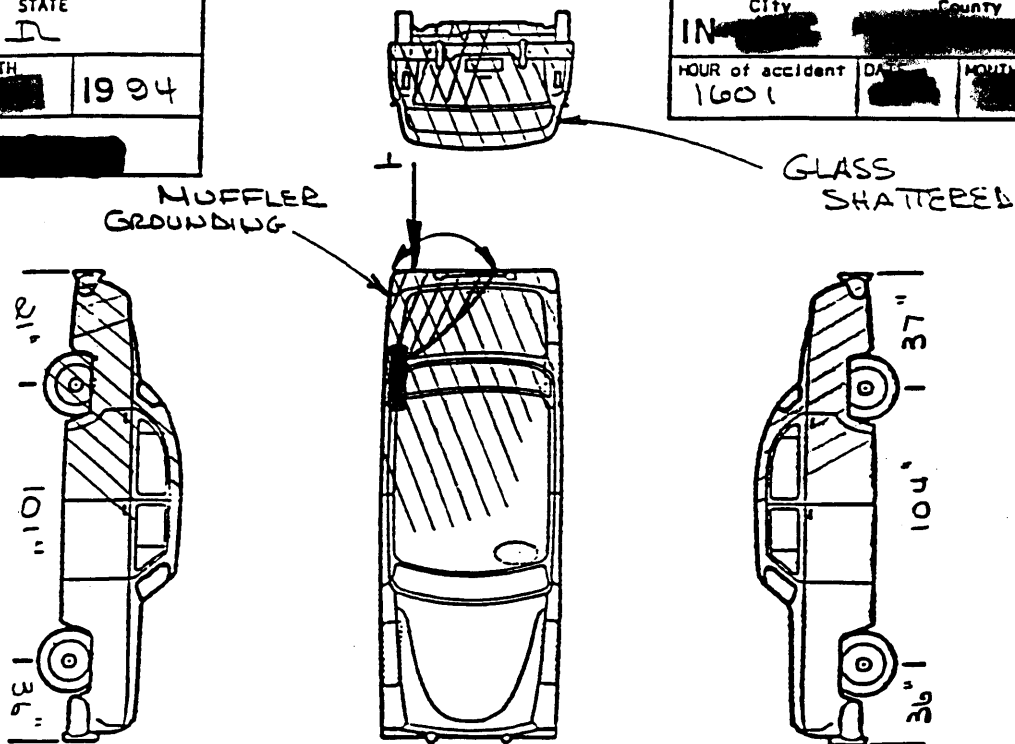
	WHEELS			LIGHTS		DOORS		BELTS	
	TIRE	RIM	MOVEMENT	WHITE	OTHER	STRUCT.	GLASS	LAP	CHST
F	0	0	Y	X	X	X	0	0	0
RF	0	0	Y			X	0	-	-
RR	0	0	Y			-	-	-	-
FR	0	0	Y			-	-	-	-



VEHICLE DAMAGE  
RECORD

MINED AT - Location			
ADDRESS			
STATE			
JR	DATE	MONTH	1994
OTOS - Made by			
Scene -			

ACCIDENT NUMBER		CASE FILE	
Street or road			
ON			
Intersection with or distance from			
AT			
City		County	
IN		State	
HOUR of accident		DATE	MONTH
1601			1994



## MAGE CODE SYMBOL

✓	Extent of contact damage other than with ground.
→	Thrust direction at point of greatest penetration
○	Areas of ground contact except by tires.

NOT OBSERVED, NOT NOTED

NOT APPLICABLE, NO SUCH

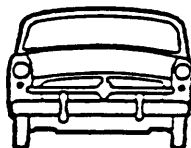
DON'T KNOW, CAN'T TELL

NOT OPERABLE, FUNCTIONAL

DAMAGED BUT FUNCTIONAL

BROKEN, NOT FUNCTIONAL

MISSING, DETACHED, GONE



See other side for size, body, and use codes. Make additional notes there.

MAKE	MODEL YEAR	VIN - Identification No.
Oldsmobile	1994	1G3AG5SM2R6
REGISTRATION - No.	State	COLOR Etc.
	1994	White
SIZE	BODY	USE CLASS
Med.	4 door	Passenger

ODOMETER	15308
SPEEDOMETER	○
LITE SWITCH	○
BRAKES	○
STEER WHEEL	○
WINDSHIELD	○
HOOD	○
ENGINE	?
BATTERY	?
STEER LINKS	?
TRUNK, DOOR	XX
PLATE LIGHT	○
DRIVE SHAFT	○
REAR GLASS	XX

	WHEELS			LIGHTS		DOORS		BELTS	
	TIRE	RIM	MOVEMENT	WHITE	OTHER	STRUCT.	GLASS	LAP	CHEST
F	○	○	1			○	○		
RF	○	○	1			X	○		
RR	○	○	20			X	○		
LD	○	○							

157-R

Appendix S:

 COUNTY CORONER'S INQUEST

1 STATE OF ILLINOIS )

2 ) SS:

3 COUNTY OF [REDACTED] )

4

5

6

7

8

AN INQUEST

9

into the manner

10

and cause of death

11

of

12

13

14

15

16

REPORT OF PROCEEDINGS

17

had in the above-entitled inquest held by [REDACTED]

18

[REDACTED] for the [REDACTED]

19

[REDACTED] office, on [REDACTED], [REDACTED],

20

1994, at 1 p.m. in Room [REDACTED] of the [REDACTED] County

21

22

[REDACTED] Illinois [REDACTED]

23

24

, C.S.R.

1 INVESTIGATOR [REDACTED]: Ladies and  
2 gentlemen of the jury and others present:

3 This is an inquest into the cause and  
4 manner of death of [REDACTED]  
5 age 51, late of address [REDACTED]  
6 [REDACTED], Illinois. [REDACTED] was  
7 pronounced dead on [REDACTED] 1994 at 4:40 p.m.  
8 in [REDACTED] [REDACTED], [REDACTED] Illinois.

9 An autopsy was performed and the cause of  
10 death was multiple injuries due to or as a  
11 consequence of an auto versus auto collision.

12 Specimens were obtained from the deceased  
13 and submitted for toxicology exams. Those results  
14 stated no presence of drugs or alcohol.

15 If there are any attorneys present, will  
16 you please state your name and the party you  
17 represent?

18 (No response)

19 INVESTIGATOR [REDACTED] On [REDACTED]  
20 at 4:45 p.m., I was dispatched by the [REDACTED]  
21 [REDACTED] radio room to [REDACTED]  
22 [REDACTED] for a fatal victim of an auto  
23 collision. I arrived at approximately 5:10 p.m.  
24 I found [REDACTED] in the emergency room. She

, C.S.R.

159-S

1 was laying on an X-ray table. Upon doing a  
2 physical exam of her I found that she had some  
3 abraised areas on her and a pattern of her jacket  
4 imprinted into her chin. There were also abraised  
5 areas on her neck and on her chest. We did take  
6 X-rays at that point, and the X-rays showed a  
7 fracture and a dislocation of her cervical spine.

8 There were some concerns by the officers  
9 at the scene of this accident that something might  
10 have happened to Ms. [REDACTED] prior to the  
11 accident that might have caused her to lose  
12 consciousness. We did do an autopsy. There was  
13 nothing in the autopsy that showed she would have  
14 had a condition that would have caused her to do  
15 that nor was anything in the toxicology analysis  
16 to show that.

17 I spoke with her doctor. She had had a  
18 physical done on the [REDACTED] of [REDACTED] of this year  
19 for her bus driver's license, and she was cleared  
20 for that physical. And her doctor stated she did  
21 not have any medical conditions at that time which  
22 would have caused something to happen.

23 Her accident happened at the intersection  
24 of [REDACTED] Avenue and [REDACTED]. On Route [REDACTED]

1 at [REDACTED] Avenue in [REDACTED]. I was not at  
2 the scene of the accident. I will let the officer  
3 that was at the scene testify as to what he found  
4 there. Before I do so, do you have any questions  
5 of me?

6 BY THE JURY:

7 Q How old was she?

8 A She was fifty-one.

9 Q And was in the car?

10 A She was driving the car, yes. She was  
11 driving when her car collided with another. She  
12 rear-ended another vehicle which was in the  
13 left-hand turn lane on Route [REDACTED] turning onto  
14 [REDACTED] Avenue. She pushed that car ahead in the  
15 roadway and then hit a minivan head-on.

16 Q She was traveling which direction then?

17 A She would have been traveling west on [REDACTED].

18 Q Did they determine any speed?

19 A I'll let Officer [REDACTED] answer that  
20 question.

21 Whereupon,

22 [REDACTED],  
23 was called as a witness, having been first duly  
24 sworn, was examined and testified as follows:

, C.S.R.

160-5

## DIRECT EXAMINATION

BY INVESTIGATOR [REDACTED]:

Q Will you please state your name and occupation?

A [REDACTED], and I'm a patrol officer for the City of [REDACTED] Police Department.

Q And how long have you been with the department?

A In excess of 13 years.

Q Do you have any specific qualifications in accident investigation?

A I've received supplemental training from [REDACTED] University.

Q And you were called to this accident on [REDACTED]?

A Yes, sir.

Q And would you tell the jury what you found there, what your investigation found?

A I had responded from the [REDACTED] Building. I was involved in an arrest situation; and monitoring radio traffic, determined there was a severely injured party. This resulted in my responding to the scene. Upon my arrival, I found

, C.S.R.

1 a maroon Cadillac, which was driven by  
2 Ms. [REDACTED]. It was essentially in the center of  
3 the intersection facing in a westerly heading. In  
4 front of that facing eastbound, was a small  
5 Chevrolet Astro van. On the west side of the  
6 intersection was a white Oldsmobile Cutlass that  
7 had displayed extensive rear-end damage. When I  
8 arrived there, Ms. [REDACTED] had already been  
9 removed to a ambulance. Resuscitative efforts  
10 were being administered.

11 Q What were the weather conditions at the  
12 time of the accident?

13 A It was approximately 60 degrees and  
14 cloudy.

15 Q The roads were dry?

16 A The roadway was dry, no precipitation at  
17 the time of the event.

18 Q And the traffic conditions at that time?

19 A They would be heavy. They would be  
20 building up for the afternoon rush hour.

21 Q And Ms. [REDACTED] was alone in her  
22 vehicle?

23 A Yes.

24 Q And did you notice any signs of braking

, C.S.R.

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1 at the scene?

2 A Found no evidence of skid marks or tire  
3 marks from evasive maneuvers.

4 Q And there was no evidence of drugs or  
5 alcohol at the scene?

6 A Correct.

7 Q Were any citations issued?

8 A No.

9 Q Do you have a diagram?

10 A Yes, I do.

11 Q Would you please show the jury what  
12 happened?

13 MR. [REDACTED]: This will be Coroner's  
14 Exhibit No. 1.

15 A We have a generic one. Essentially this  
16 is the accident situation that we found: White  
17 Oldsmobile. It was driven by a 45-year-old woman  
18 from Oklahoma, and her three children were in the  
19 car. They all received minor injuries. Described  
20 van and the maroon Cadillac-- East of the  
21 intersection, we found a road scar, a scrape  
22 essentially, in the pavement; and that appears to  
23 have come from the rear end of this car from the  
24 damage. And generally, that tells us the area of

, C.S.R.

1 first contact when the vehicles collided. The  
2 right rear tire was locked down by damage on the  
3 white Oldsmobile and essentially left what we call  
4 a skid mark across the intersection. That's  
5 pretty much the situation as we found it.

6 BY THE JURY:

7 Q This white car was in the turning lane  
8 over here?

9 A Yes, sir. She was-- the signal light--  
10 It has traffic control arrows there, and the light  
11 went to green where these people had to stop to  
12 allow eastbound traffic to proceed, and she was  
13 stopped back in this area.

14 Q Is that by the [REDACTED]?

15 A Exactly.

16 Q Where would that be?

17 A The [REDACTED] is right here.

18 Q There were no skid marks?

19 A Found nothing in the turn lane

20 Q Was her brakes working?

21 A Yes.

22 Q They were working.

23 INVESTIGATOR [REDACTED]: The gentleman  
24 that was driving the van commented when we took

, C.S.R.

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1 his statement-- when I debriefed him-- that he  
2 observed no evidence of slowing as if brakes were  
3 applied or some attempt was made to slow.

4 BY THE JURY:

5 Q So the white car was actually at a  
6 standstill?

7 A Yes.

8 Q Is this the Oldsmobile?

9 A Yes.

10 Q She apparently came up from behind?

11 A She was traveling down the turn lane and  
12 collided with the car white car dynamic so the  
13 collision could cause her to rotate or curve a  
14 little bit and it moved a little bit and it moved  
15 in a more or less center of the intersection as  
16 the van was coming across. The secondary  
17 collision was relatively minor. The van sustained  
18 very minor damage.

19 Q The van was coming from here?

20 A Right. He was held up by a red light  
21 and the signal changed, came across and got the  
22 green light. He was the third car back he tells  
23 me, so he just started coming across and it was  
24 immediate in front of him.

1 Q Two cars had already gone by ahead of  
2 him?

3 A Correct.

4 Q Through the intersection?

5 A Correct.

6 A JUROR: Thank you.

7 Q Officer, was there any examination done  
8 on the car as to say whether it was in good  
9 mechanical condition or not?

10 BY THE WITNESS:

11 A The nature of the collision and some of  
12 the information we developed later, a car coming  
13 down the turn lane like that-- At the scene, I  
14 examined the interior for anything that might have  
15 fouled the accelerator, floor mats, something  
16 laying on the floor. Did an under-the-hood  
17 examination. Found the throttle cables fine,  
18 there was no binding or sticking or anything like  
19 that. At the scene of the event, I found the  
20 brake pedal high. It was a high pedal. It was  
21 firm, suggesting the hydraulic system was okay.  
22 We did a supplemental examination, had  
23 professional mechanics examine the vehicle. In  
24 their opinion, the hydraulic system was fine.

, C.S.R.

1                    INVESTIGATOR [REDACTED]: Do you have any  
2 more questions?

3 BY THE JURY:

4                    Q     The light was green, apparently, in the  
5 direction she was traveling in?

6                    A     Correct. And she would have had to wait  
7 for oncoming traffic to clear.

8                    Q     To take a left?

9                    A     Yes.

10                   Q     Did it indicate at all that her intent  
11 was to turn?

12                   A     What her intent is speculative. It's  
13 consistent with her trip plan to go home -- from  
14 what survivors tell me -- that would be to make a  
15 turn and go that way.

16                   Q     To go left on [REDACTED] Avenue.

17                   INVESTIGATOR [REDACTED] Is that it?

18                   (No response)

19                   INVESTIGATOR [REDACTED] Ladies and  
20 gentlemen of the jury, this constitutes the  
21 evidence available at this time. It will now be  
22 the duty of the jury to determine the manner of  
23 this person's death, be it accident, homicide,  
24 suicide, natural causes or undetermined.

1           When you've reached that verdict, please  
2       return it to me.

3                       (Whereupon, the jury  
4                       deliberated upon their  
5                       verdict in privacy  
6                       and returned after  
7                       which the following  
8                       proceedings were had:)

9           INVESTIGATOR [REDACTED]: Members of the  
10       jury, have you reached your verdict?

11           THE FOREPERSON: We have.

12           INVESTIGATOR [REDACTED]: Would you read  
13       that verdict to me?

14           THE FOREPERSON: We find the death to be  
15       accidental.

16           INVESTIGATOR [REDACTED]: Is this all your  
17       findings?

18                       (Positive response by the jury)

19           INVESTIGATOR [REDACTED]: Thank you very  
20       much.

21  
22       WHICH WERE ALL THE PROCEEDINGS  
23       TAKEN IN THE ABOVE ENTITLED  
24       CAUSE ON THIS DATE.

, C.S.R.

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**TRANSPORTATION RESEARCH CENTER**

Indiana University

Indiana

**ON-SITE AIR BAG INVESTIGATION**

**SELECTED PHOTOGRAPHS**

CASE NO. - 95-05

FLEET - PRIVATE VEHICLE

LOCATION - ILLINOIS

ACCIDENT DATE - 1994

A total of fifty color copies of photographs are presented and referenced as Photograph #01 through Photograph #50. Photographs numbered #07, #08, #13, #14, #15, #16, #32, and #47 were taken and made available by the Illinois, Police Department. Photographs numbered #49 and #50 were taken and made available by the Coroner's Office. The remainder of these photographs were taken by the Transportation Research Center.

, 1995

Contract Number: DTNH22-94-D-17058

Prepared for:

U.S. Department of Transportation  
National Highway Traffic Safety Administration  
National Center for Statistics and Analysis  
Washington, D.C. 20590





**# 01 -- 1990 Cadillac Eldorado's northwestward travel path approximately 60 m (200 ft) from impacting the 1994 Oldsmobile Cutlass Ciera**



**# 02 -- 1990 Cadillac Eldorado's northwestward travel path approximately 40 m (130 ft) from its crash with the 1994 Oldsmobile Cutlass**





**# 03 -- 1990 Cadillac Eldorado's northwestward travel path approximately 5 m (15 ft) from impacting the rear of the 1994 Oldsmobile Ciera**



**# 04 -- 1990 Cadillac Eldorado's northwestward travel path in left-hand turn lane at impact with rear of 1994 Oldsmobile Cutlass Ciera**



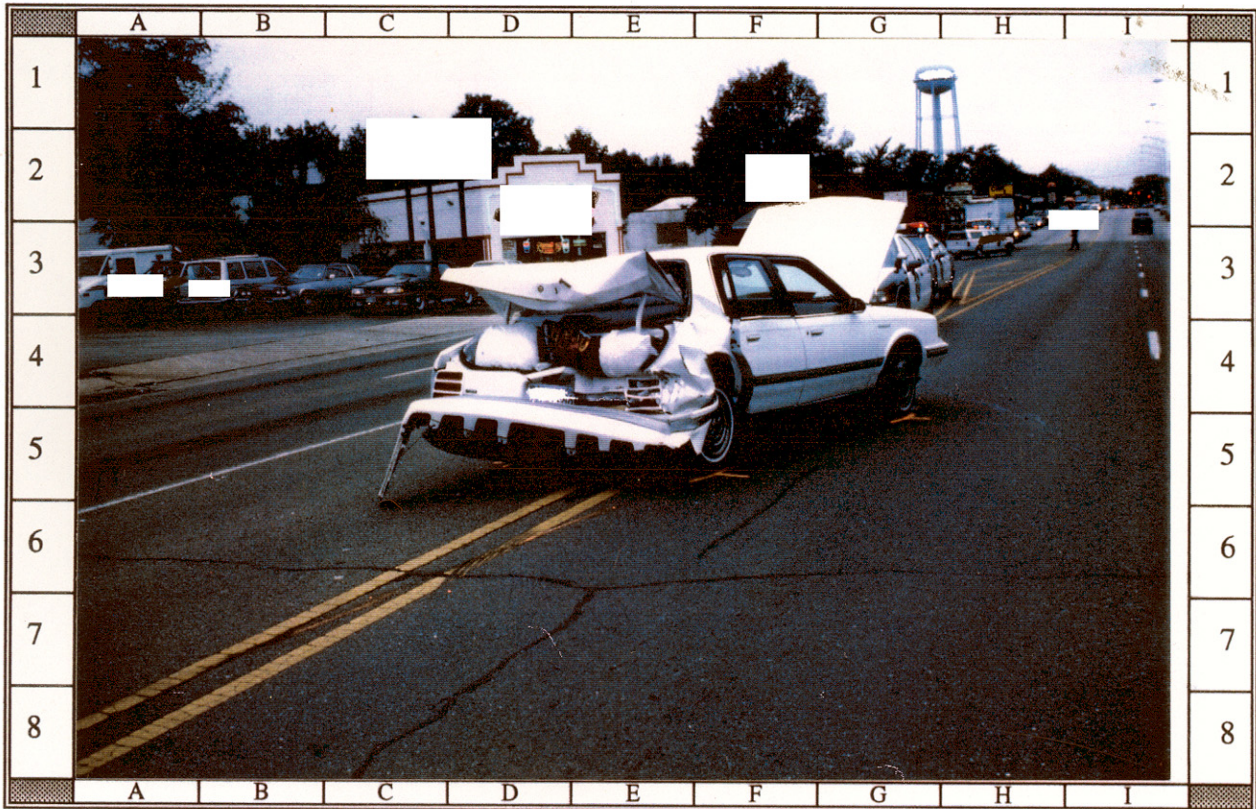


# 05 -- 1994 Oldsmobile Cutlass Ciera is knocked northwestward ~ 40 m (130 ft) to final rest position post-impact with 1990 Eldorado

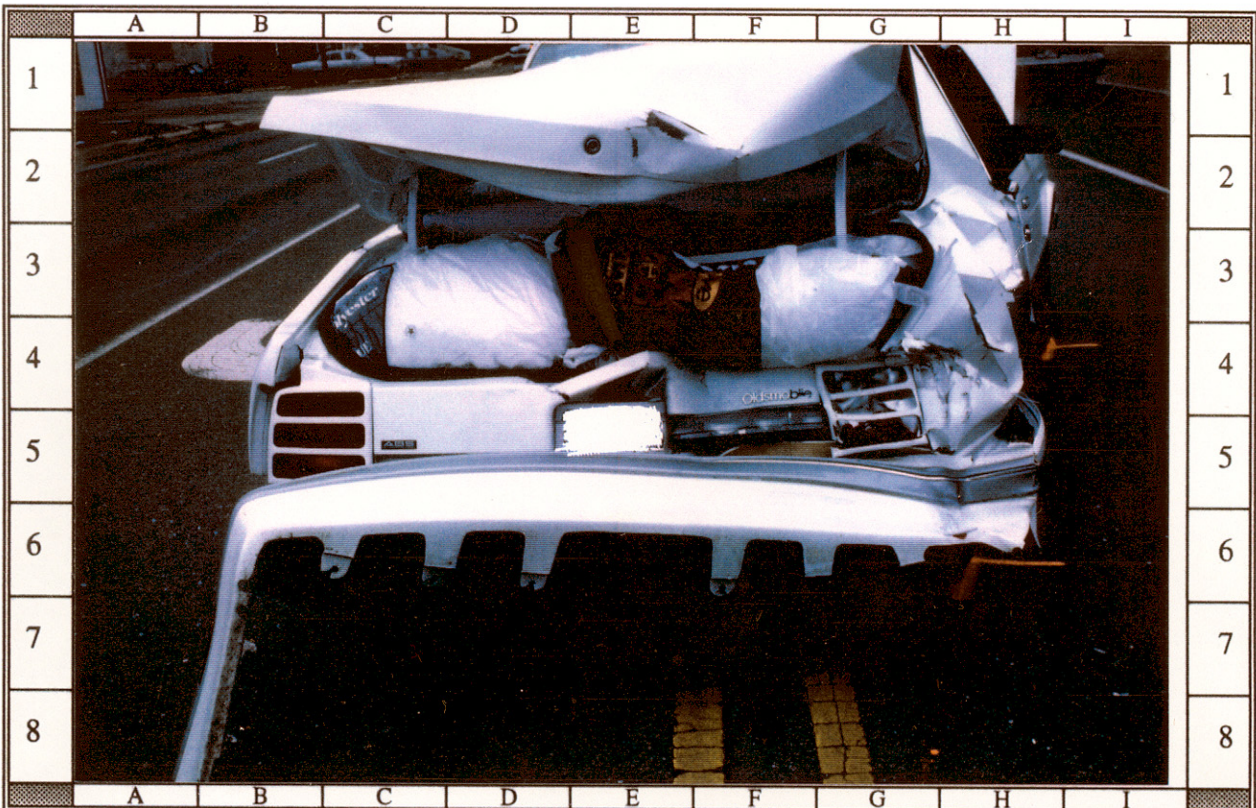


# 06 -- Northwest view of 1994 Oldsmobile Cutlass Ciera's final rest position in southeastward left-hand turn lane





# 07 -- On-scene west-northwest view of 1994 Oldsmobile Cutlass Ciera at final rest position; rear damage is from 1990 Cadillac Eldorado

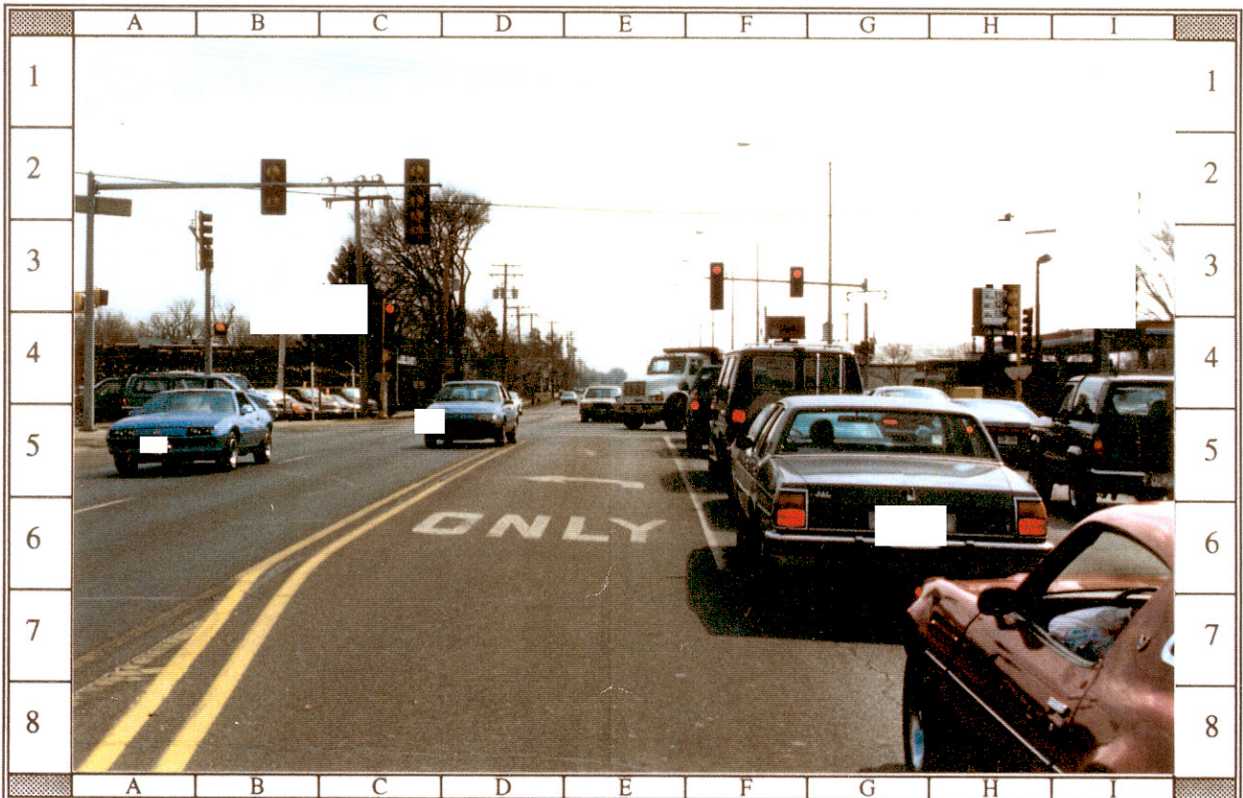


# 08 -- On-scene northwest close-up view of 1994 Oldsmobile Cutlass Ciera's rear damage; NOTE: direct damage to right half only





**# 09 -- Southeast view of 1990 Cadillac Eldorado's and 1994 Oldsmobile Cutlass Ciera's northwest path of travel in left-hand turn lane**



**# 10 -- "1993 Chevrolet, 4x2, cargo van's southeastward travel path in" inside SE lane ~ 60 m (200 ft) from impacting 1990 Eldorado**





**# 11 -- 1993 Chevrolet cargo van's southeastward travel path in inside SE lane ~ 40 m (130 ft) from its frontal crash with '90 Eldorado**

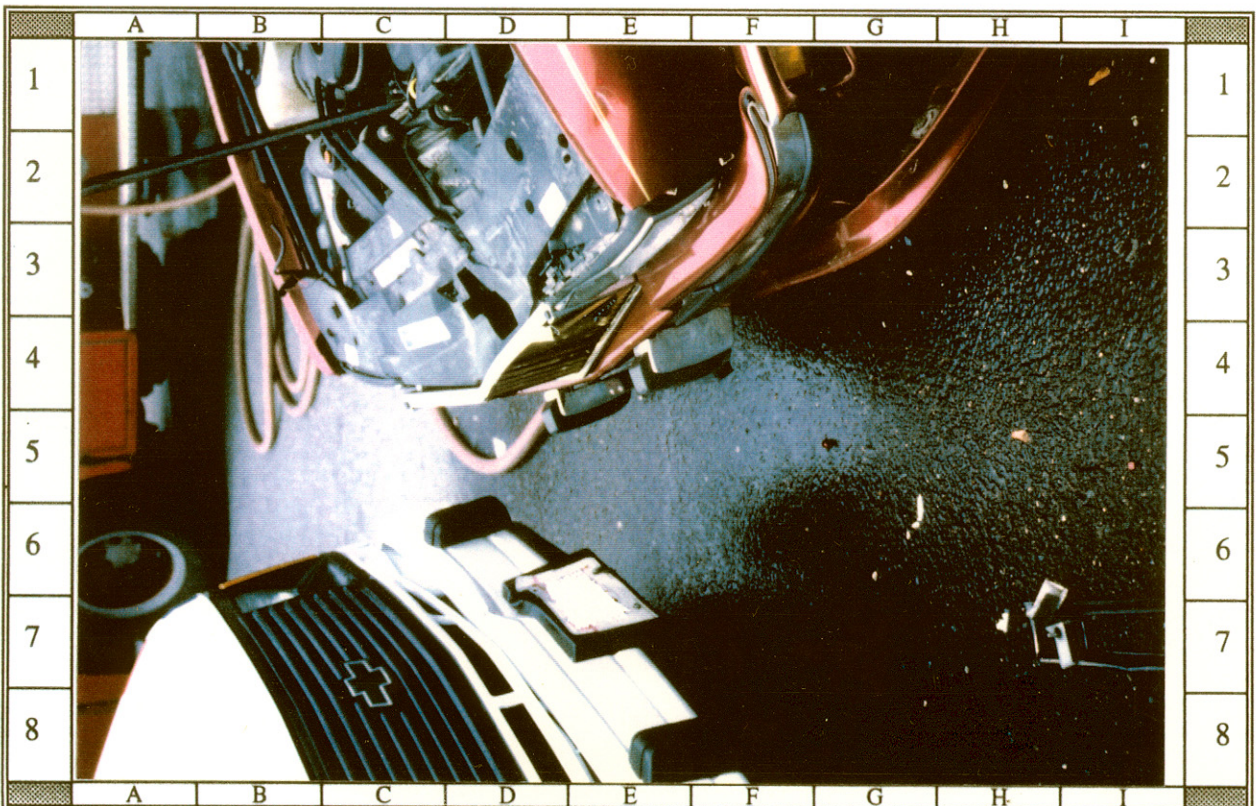


**# 12 -- 1993 Chevrolet, 4x2, cargo van's southeastward travel path in inside SE lane just prior to its frontal crash with '90 Eldorado**





**# 13 -- On-scene northward view of 1990 Cadillac Eldorado and 1993 Chevrolet cargo van at their final rest positions in intersection**

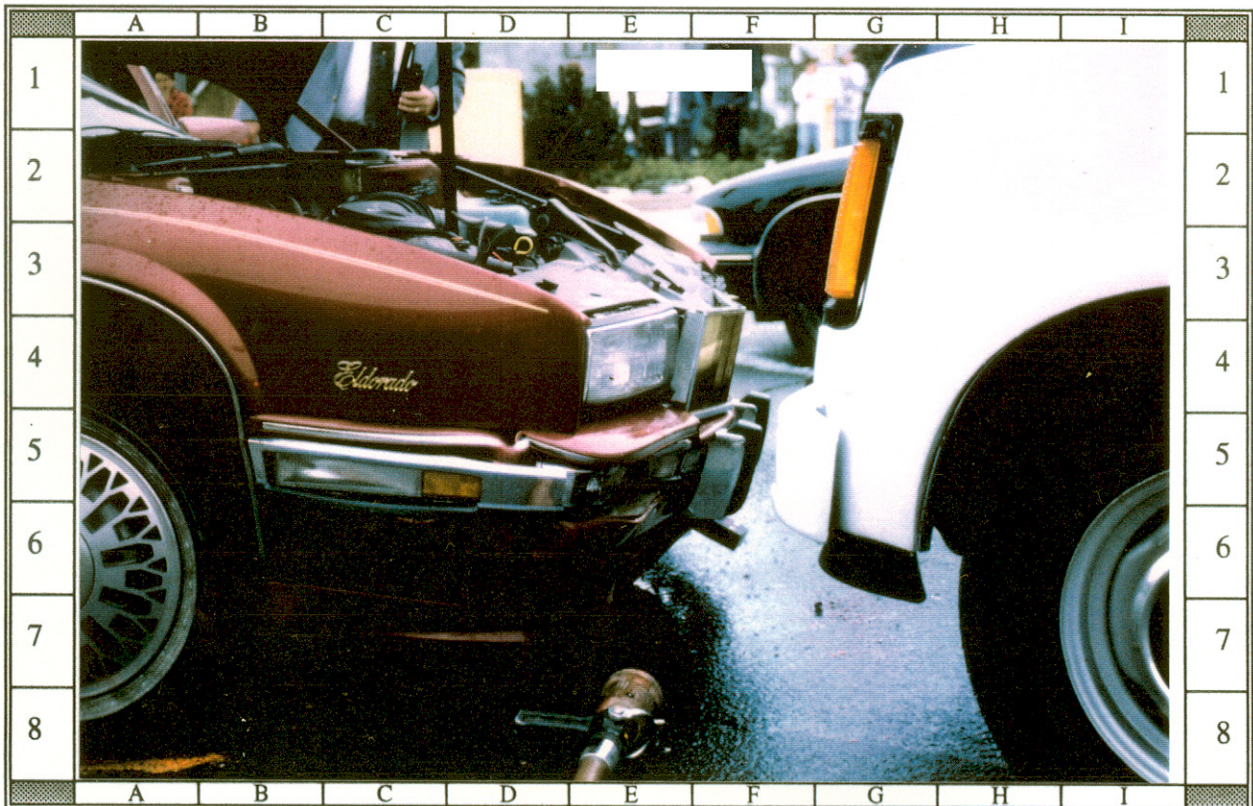


**# 14 -- On-scene northeast close-up view of 1990 Cadillac Eldorado's FR impact with 1993 Chevrolet's FL; NOTE: van's FL bumper damage**



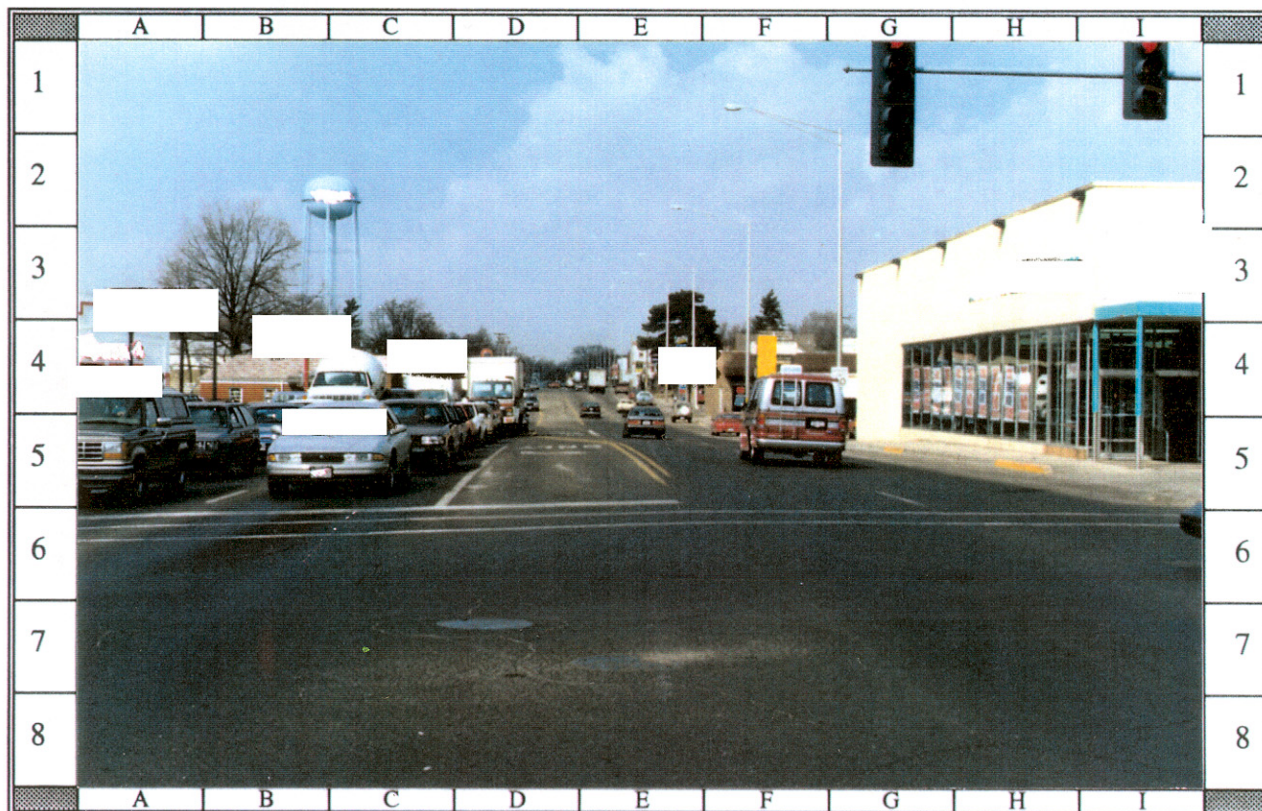


**# 15 -- On-scene southward view of 1990 Cadillac Eldorado and 1993 Chevrolet cargo van at their final rest positions in intersection**

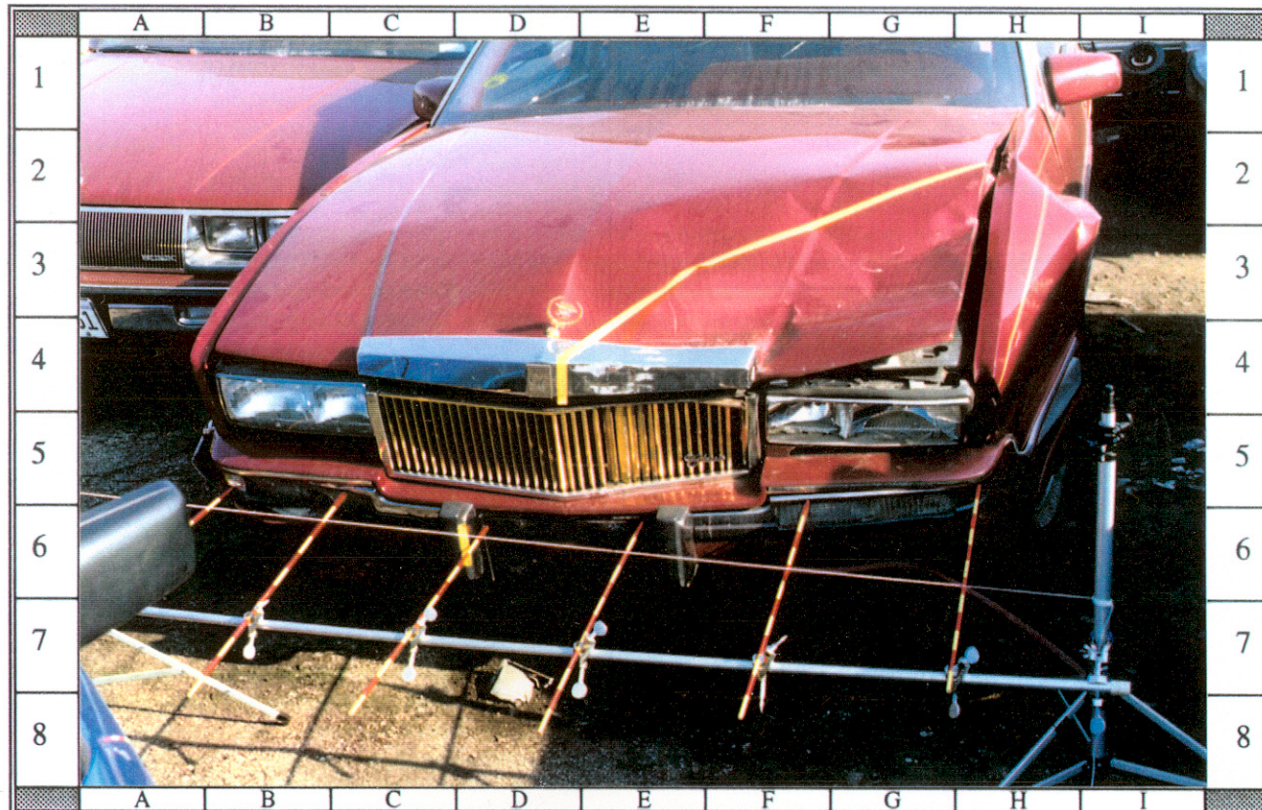


**# 16 -- On-scene southwest close-up view of 1990 Cadillac Eldorado's FR impact with 1993 Chevrolet's FL; NOTE: car's FR bumper damage**



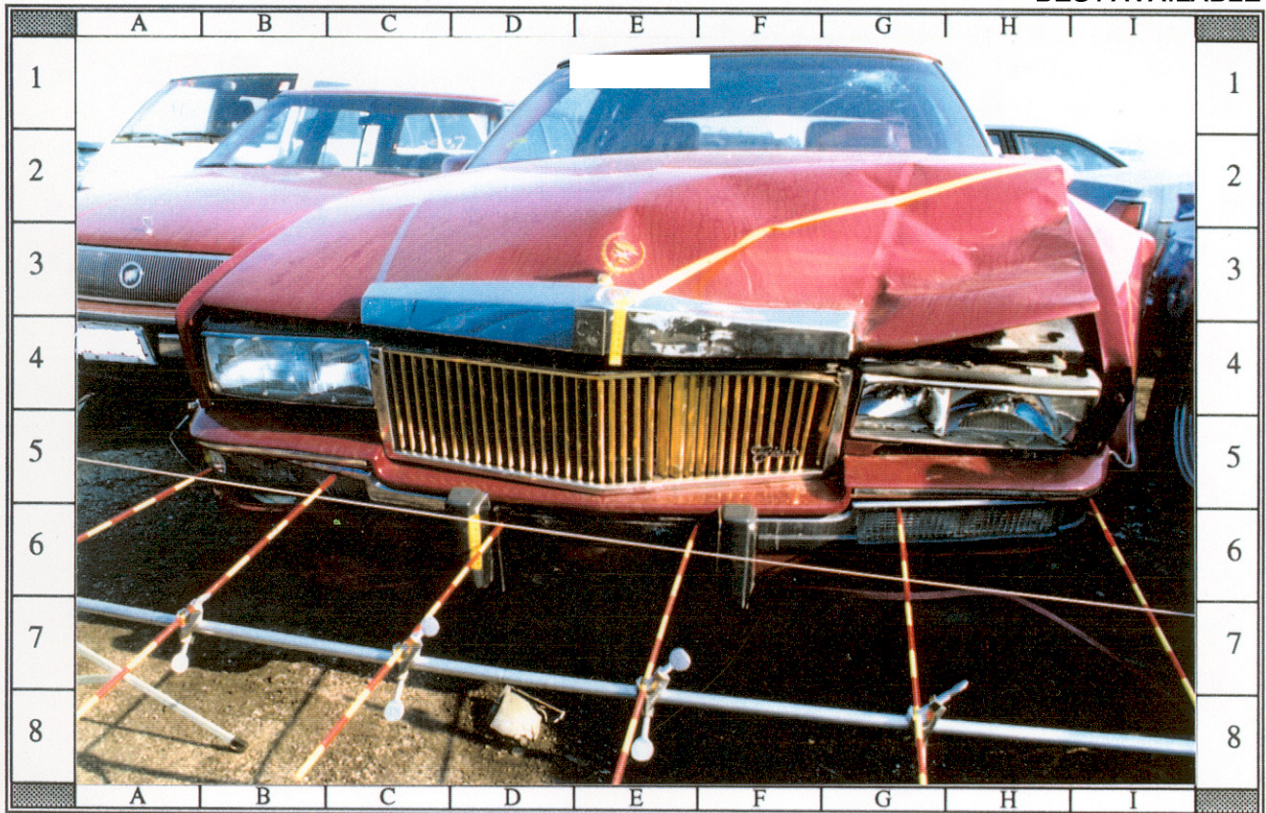


# 17 -- Northwest view of 1993 Chevrolet, 4x2, cargo van's southeast path of travel in inside southeastbound lane

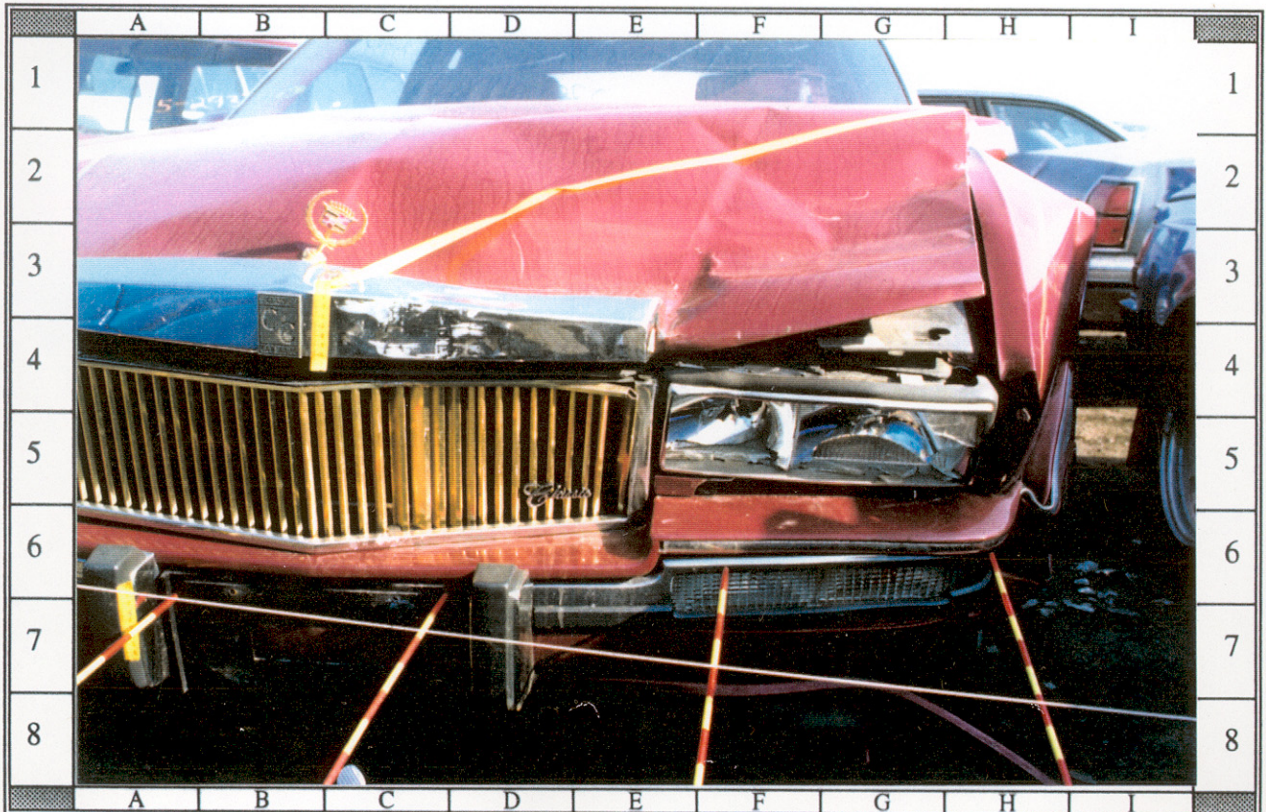


# 18 -- 1990 Cadillac Eldorado's damaged front--from ~ 15 degrees L of front with contour gauge present



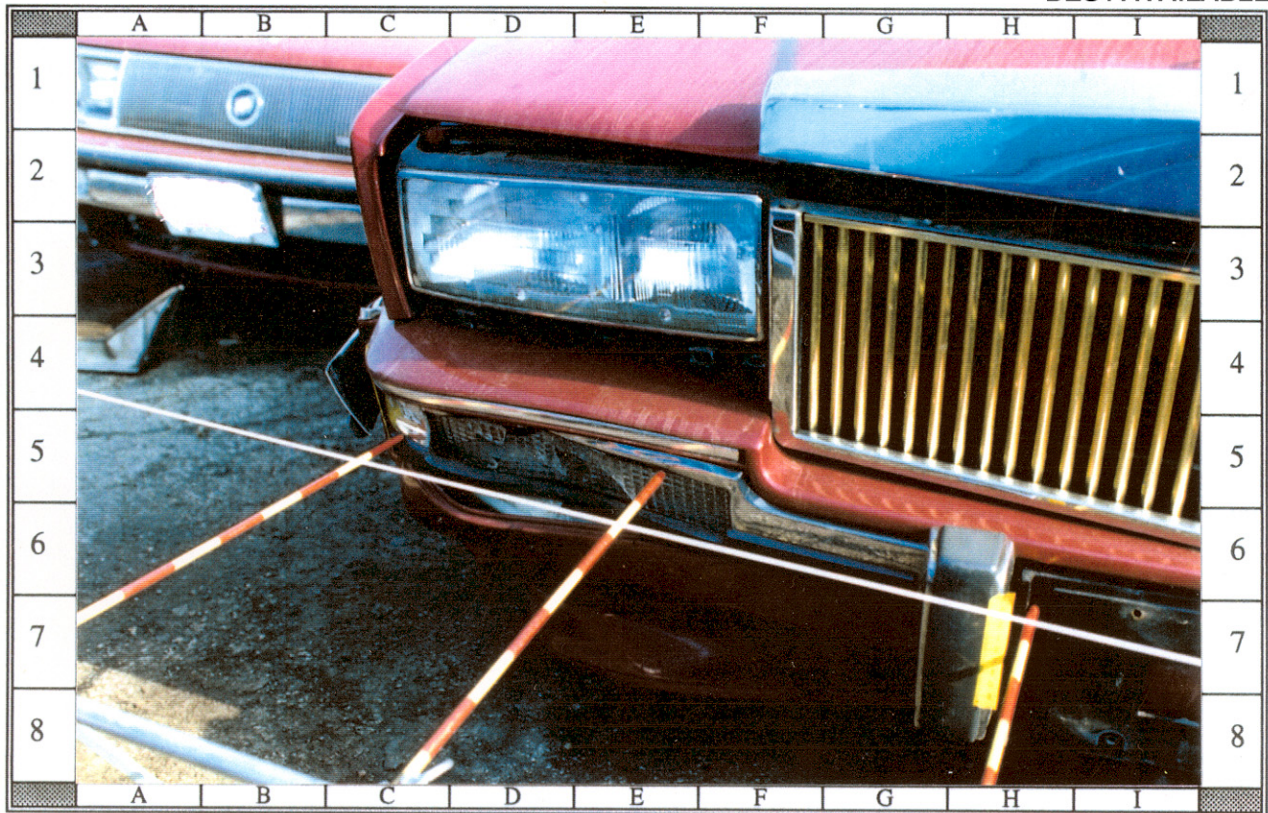


# 19 -- Close-up of 1990 Cadillac Eldorado's damaged front left from impact with rear of 1994 Oldsmobile Cutlass Ciera's rear right

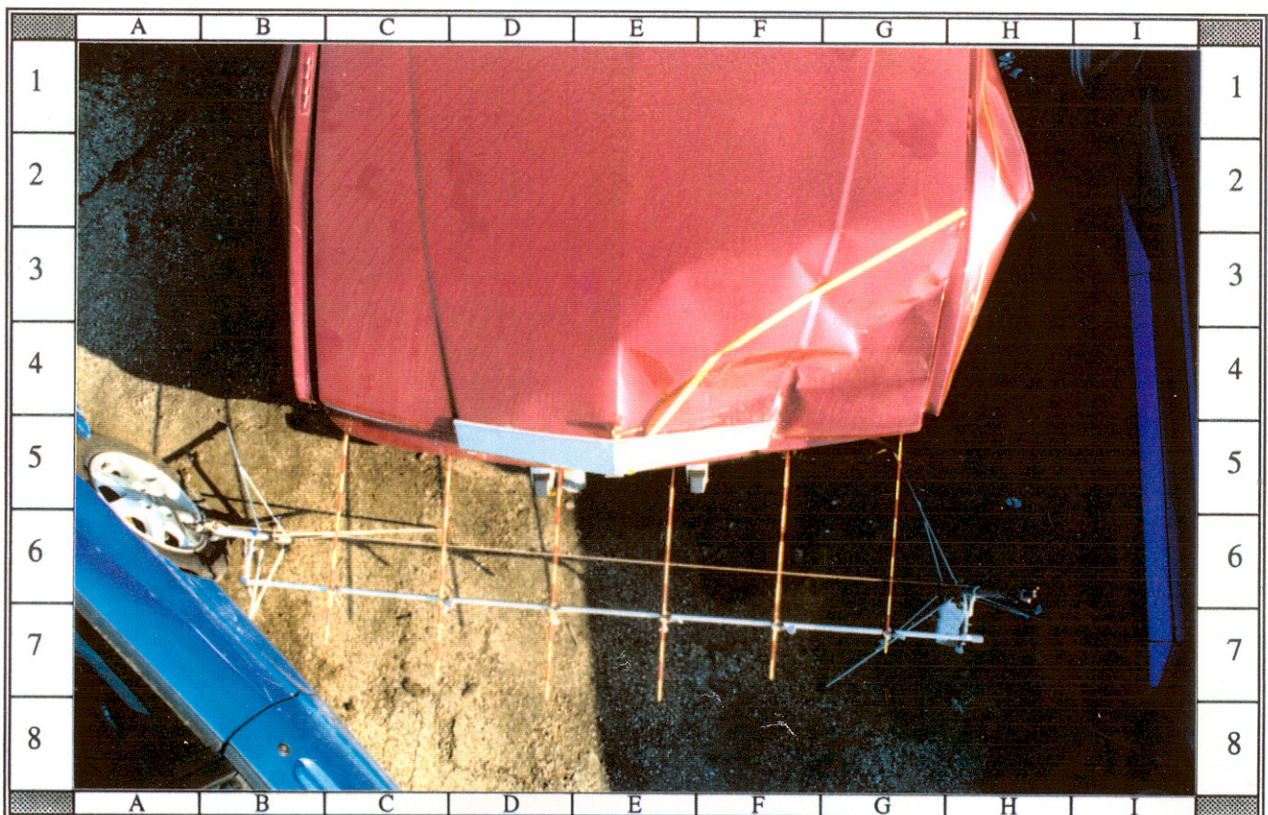


# 20 -- Closer-up of '90 Cadillac Eldorado's damaged FL from impact with rear of '94 Ciera; NOTE: yellow tape outlines direct damage



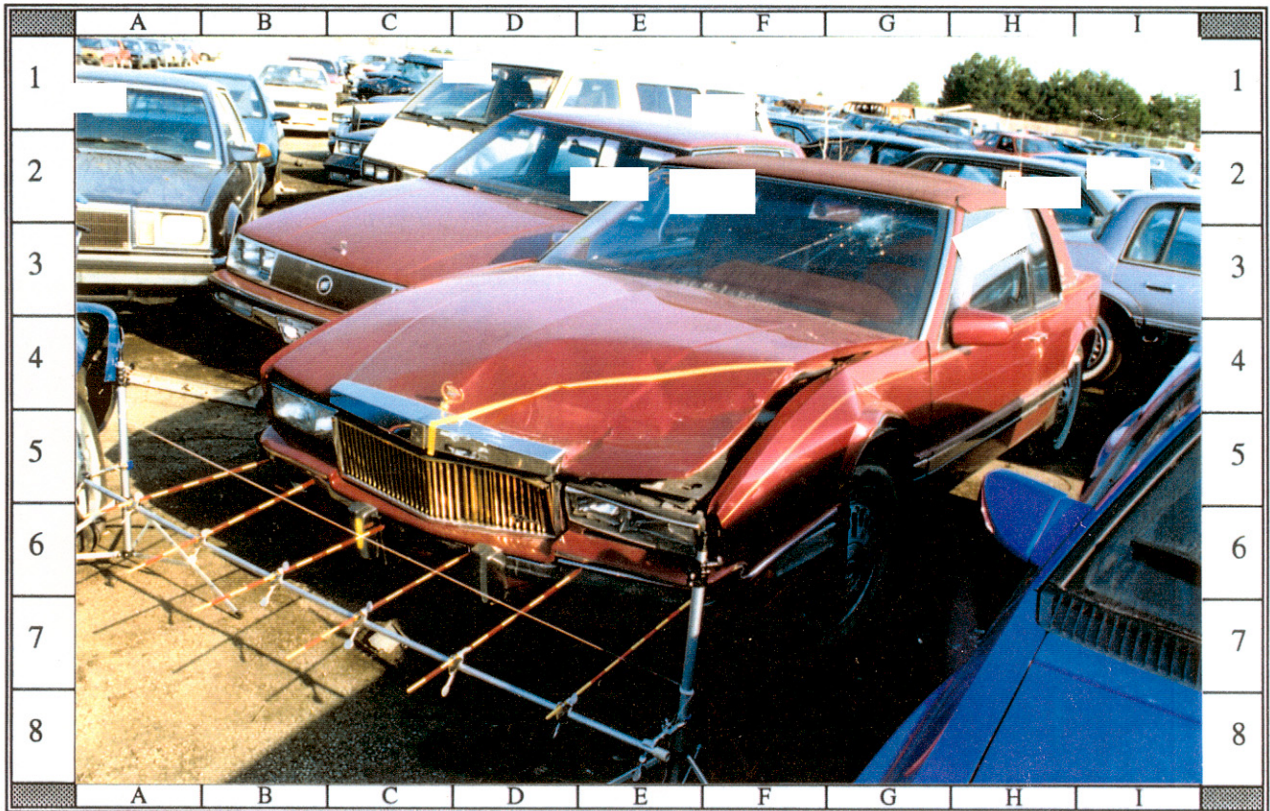


# 21 -- Close-up of 1990 Eldorado's FR damage from impact with FL of '93 Chevrolet van; NOTE: direct damage-from tape to R bumper corner

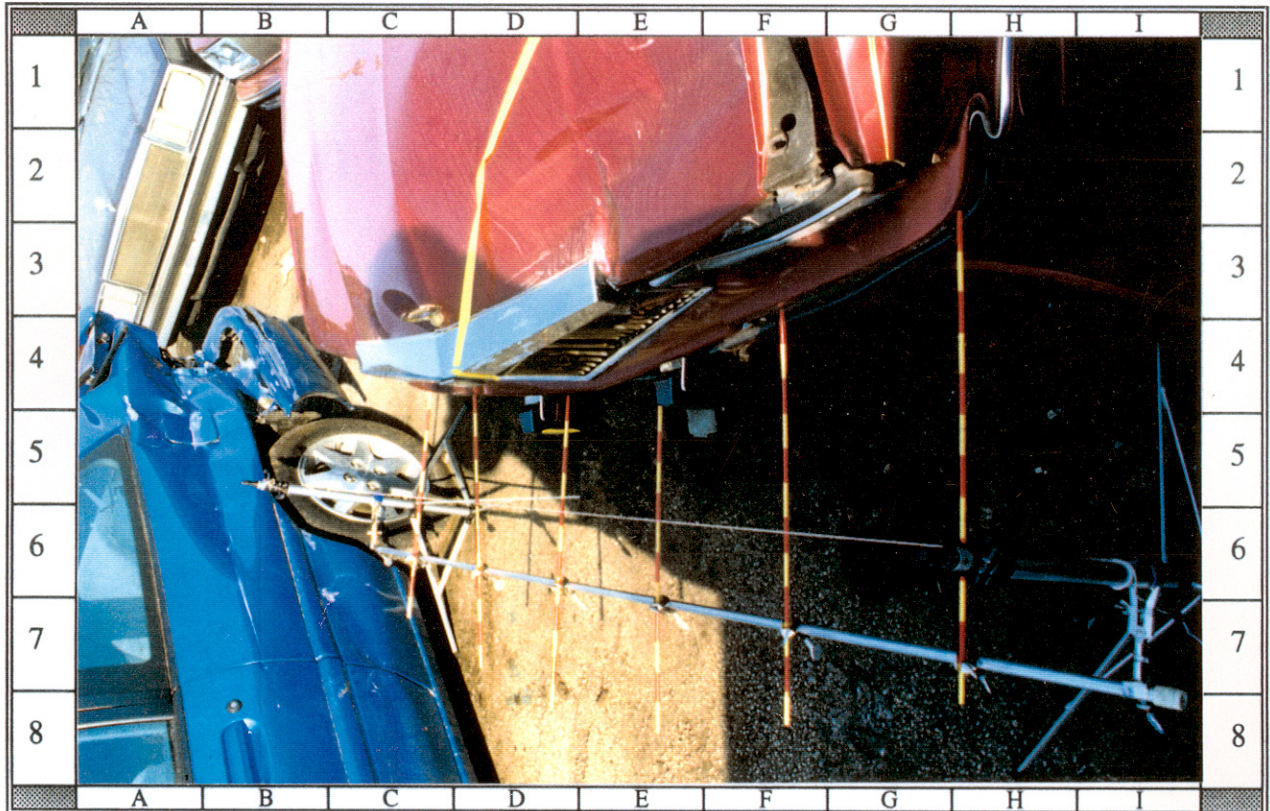


# 22 -- Overhead view of 1990 Cadillac Eldorado's frontal damage showing extend of crush; see calibrated rods





**# 23 -- 1990 Cadillac Eldorado's frontal damage--from ~ 30 degrees L of front; NOTE: yellow tape outlines crush from 1994 Oldsmobile**



**# 24 -- Left side reference line view of 1990 Cadillac Eldorado's front damage showing extend of crush; see calibrated rods**





**# 25 -- Close-up of induced damage to '90 Cadillac Eldorado's left front fender and wheel well viewed from left**

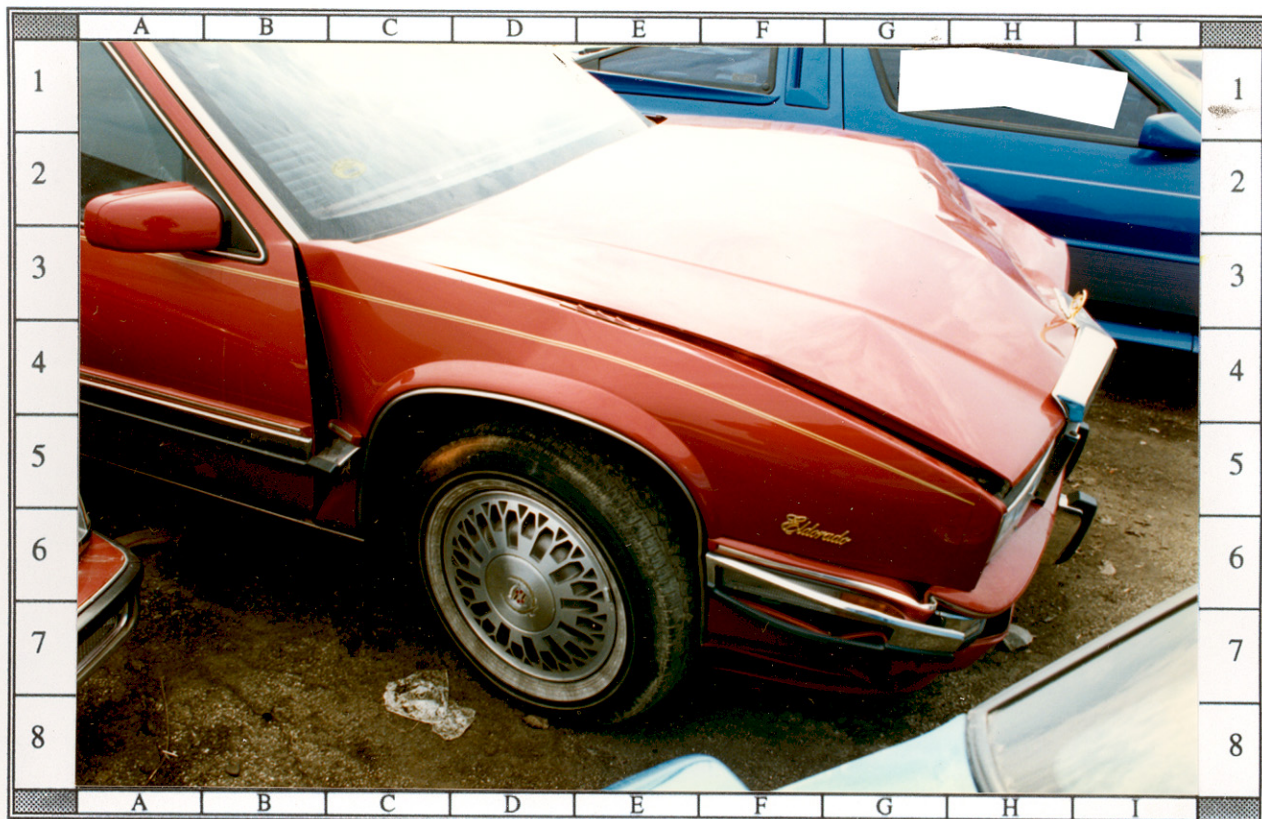


**# 26 -- 1990 Cadillac Eldorado's undamaged back and left rear--from ~ 35 degrees L of rear; NOTE: no induced damage is evident**



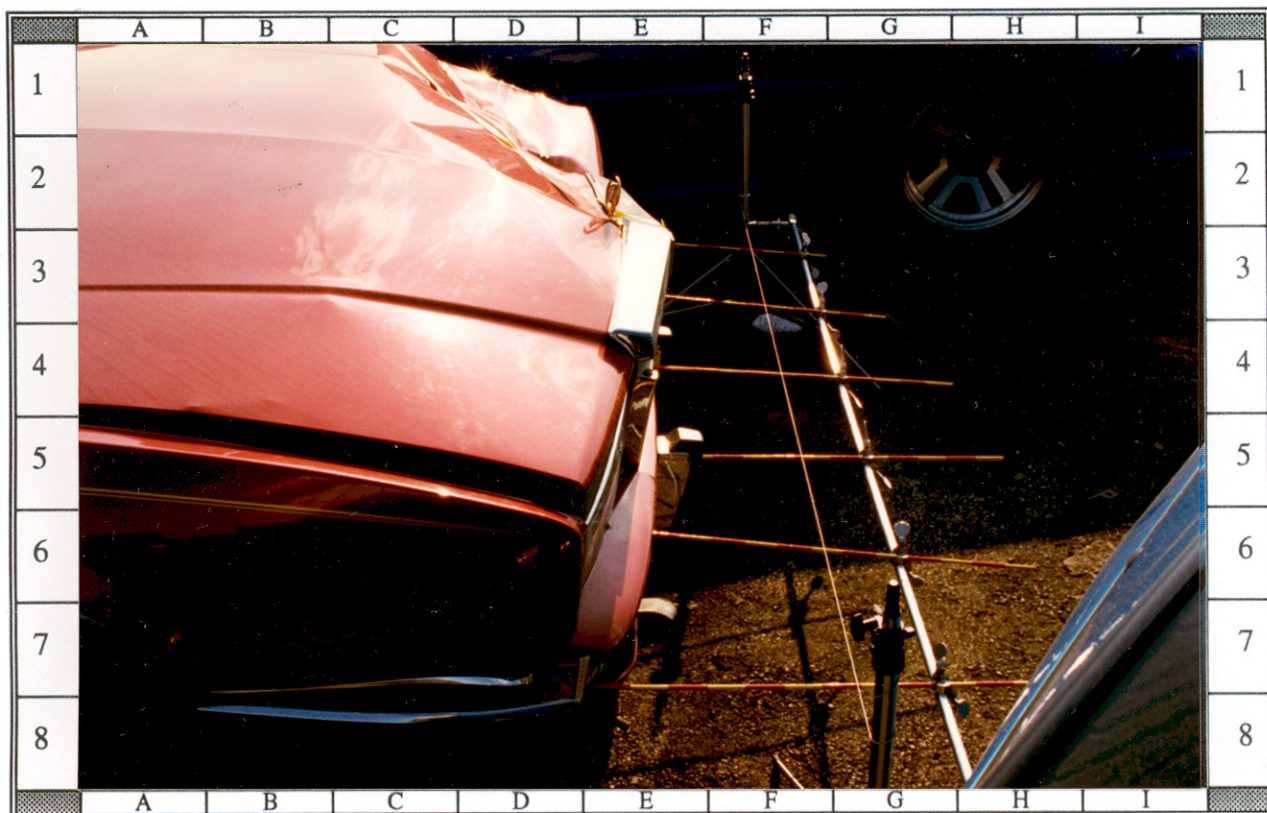


# 27 -- 1990 Cadillac Eldorado's undamaged back and right rear--from ~ 15 degrees R of rear; NOTE: no induced damage is evident

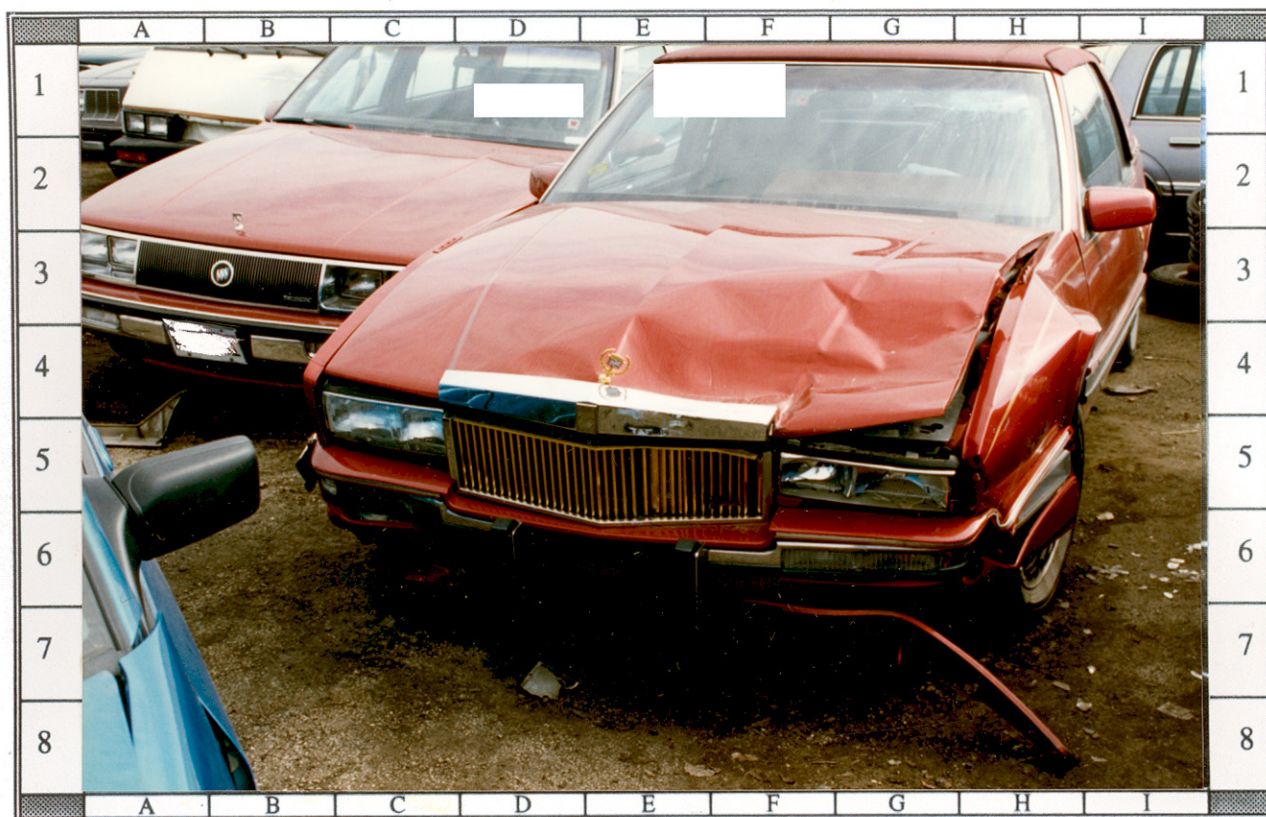


# 28 -- Close-up of induced damage to 1990 Cadillac Eldorado's right front fender and damage to front bumper & hood viewed from right





# 29 -- Right side reference line view of 1990 Cadillac Eldorado's front damage showing extent of crush; see calibrated rods



# 30 -- 1990 Cadillac Eldorado's damaged front--from ~ 15 degrees L of front without contour gauge present



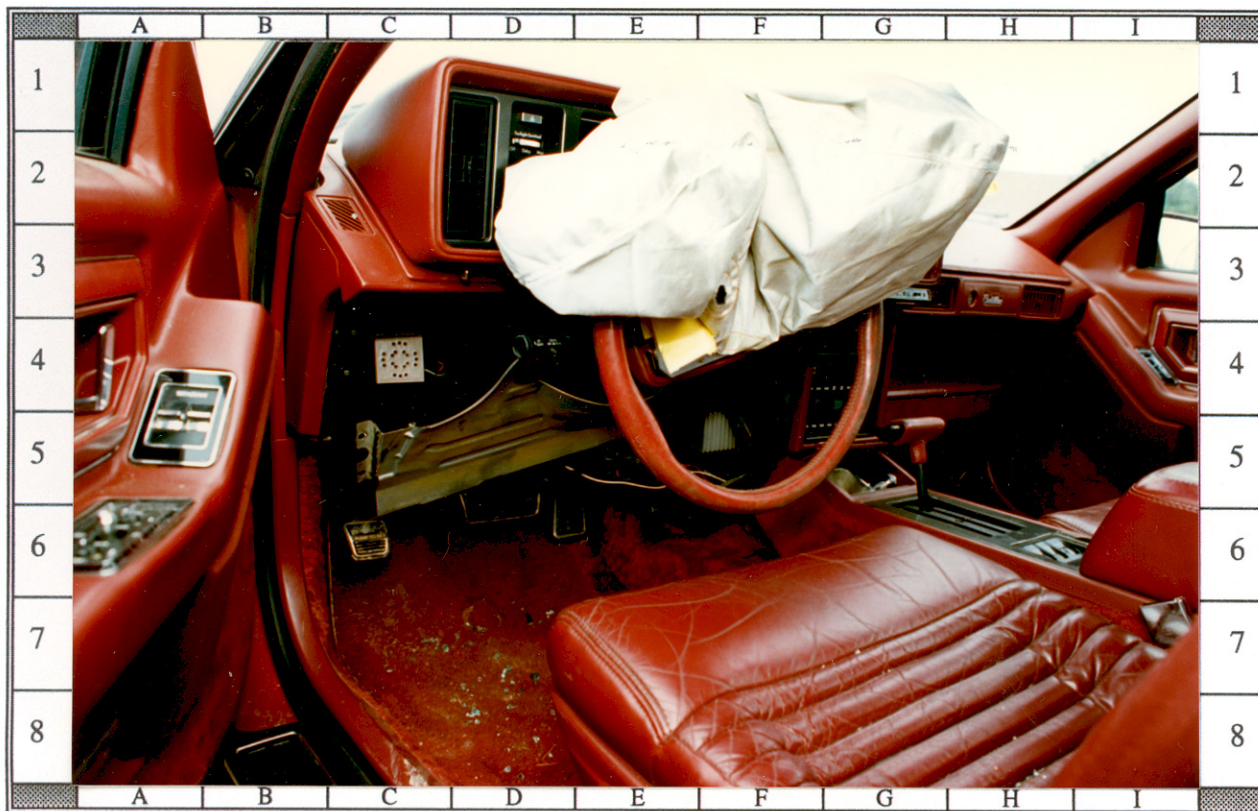


# 31 -- 1990 Cadillac Eldorado's LF interior door surface and deployed driver's air bag; NOTE: contacts to air bag



# 32 -- On-scene view of 1990 Cadillac Eldorado's LF seating area & deployed driver's air bag; NOTE: obvious windshield contact





**# 33 -- 1990 Cadillac Eldorado's LF seating area & deployed driver's air bag; NOTE: LF knee bolster removed prior to inspection**



**# 34 -- Close-up of LF knee bolster from 1990 Cadillac Eldorado; NOTE: contacts on bolster and bolster lying across driver's seat**





# 35 -- Close-up of 1990 Cadillac Eldorado's LF knee bolster and floor pan area; NOTE: contact point on top of steering wheel



# 36 -- Close-up of 1990 Cadillac Eldorado's driver air bag; NOTE: contacts (green dots) on air bag





**# 37 -- Closer-up of '90 Cadillac Eldorado's driver air bag showing contacts (green dots); lower left mucous--upper right probably skin**



**# 38 -- Close-up of 1990 Cadillac Eldorado's steering wheel hub and rim;  
NOTE: SW and rim collapsed at shear module from driver loading**





**# 39 -- Close-up of 1990 Cadillac Eldorado's air bag cover & backing material which were blown off SW hub during deployment--back seat**



**# 40 -- Closer-up of '90 Cadillac Eldorado's air bag cover; NOTE: cover flaps did not open at designated pre-stressed locations**



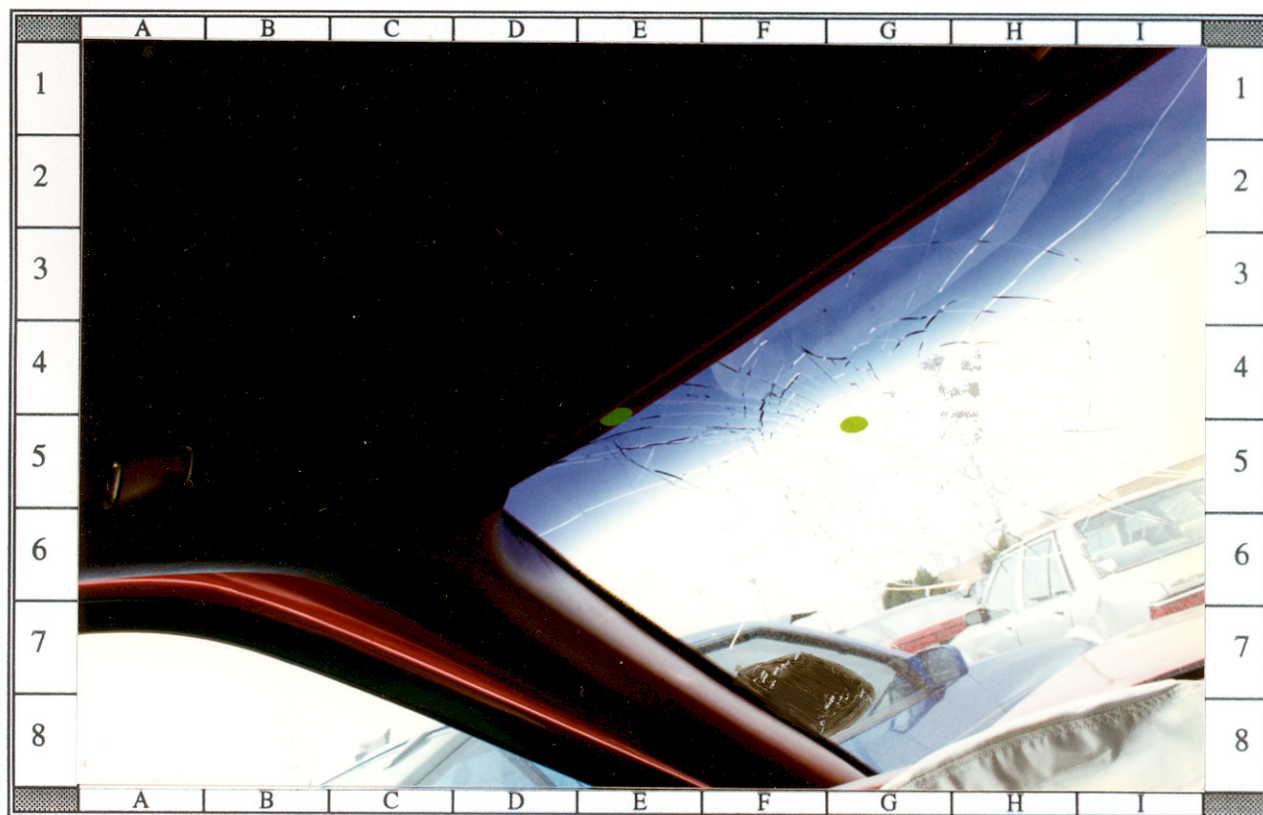


# 41 -- Closest-up of 1990 Cadillac Eldorado's air bag cover showing imprint (cells E3--E5) to right side of unopened cover flaps

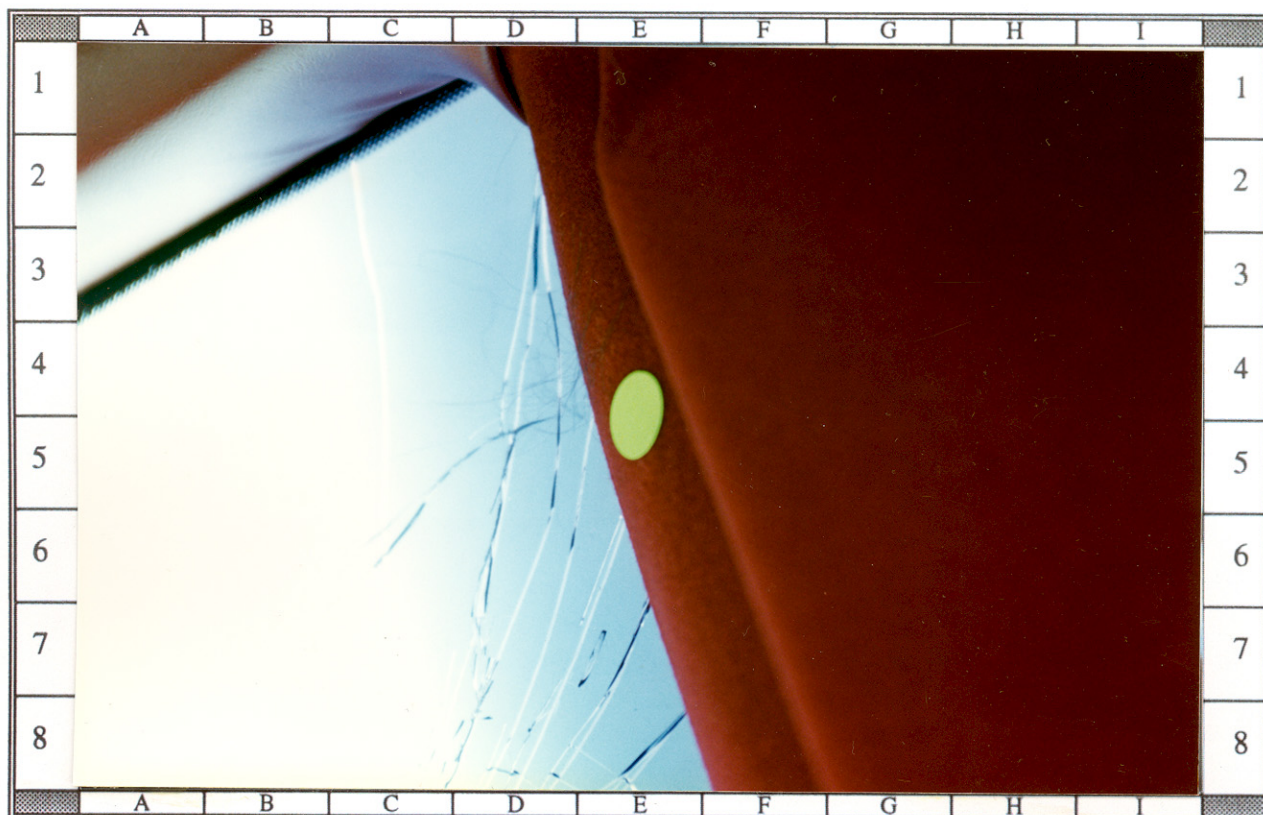


# 42 -- 1990 Cadillac Eldorado's LF seating area & deployed driver's air bag from RF; NOTE: contacts to SW rim (E3) & windshield (E1)





**# 43 -- Close-up of driver's contacts to 1990 Cadillac Eldorado's front header and windshield**



**# 44 -- Closer-up of driver's contact to 1990 Cadillac Eldorado's front header; NOTE: hair strands sticking to header (cells E4--F5)**





**# 45 -- 1990 Cadillac Eldorado's center console and instrument panel and right front dash; NOTE: no evidence of occupant contacts**



**# 46 -- Close-up of 1990 Cadillac Eldorado's floor mounted transmission selector; NOTE: blood droplet @ base of selector (cells E5--F5)**





**# 47 -- On-scene view of '90 Cadillac Eldorado's portable cellular phone found under R dash; NOTE: blood droplet near shifter (cell C1)**



**# 48 -- 1990 Cadillac Eldorado's rear seating area showing outboard three-point lap & shoulder belts; NOTE: air bag cover on seat**



**“GRAPHIC”  
PHOTOGRAPHS and IMAGES**

**Several vivid photographs have been removed for this case.  
These photographs contain highly graphic material  
which may be improper for the general audience.**

**IN 9505; Photos #49 & #50**

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**If you would like a copy of these photographs and/or images  
please call or write to:**

**Marjorie Saccoccio at (617) 494-2640  
VOLPE NATIONAL TRANSPORTATION SYSTEMS CENTER  
55 Broadway  
Cambridge, MA 02142**